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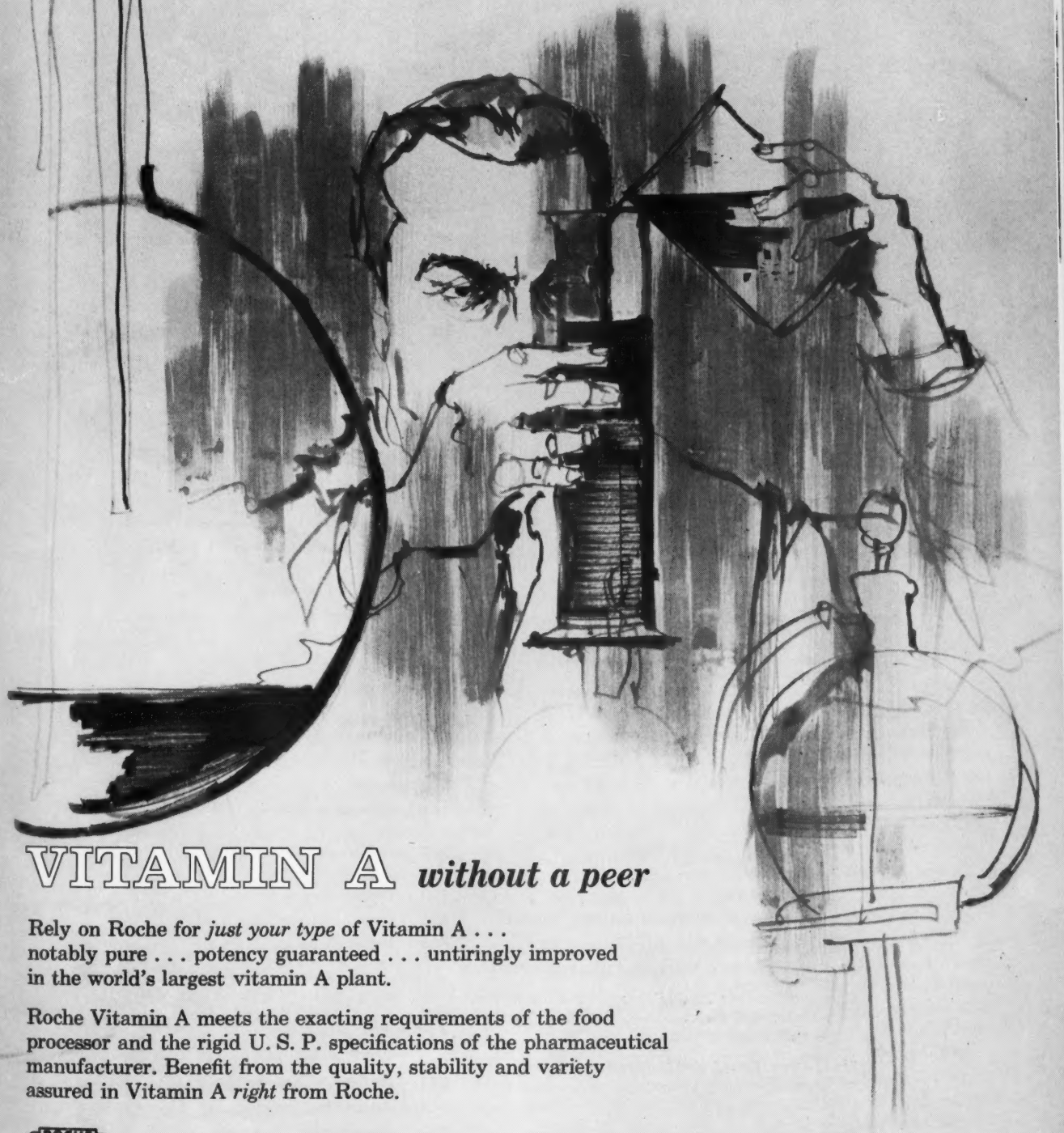

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Drug and Cosmetic Industry

Contents

September 1961 Vol. 89 No. 3

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Drug & Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Paul W. Alexander, Executive Vice-president and Secretary. Editorial and General Office: 101 West 31st St., New York 1, N. Y., U.S.A. Telephone, LOngacre 3-3177. Publication Address: Sun Printing Corp., 28 Renne Ave., Pittsfield, Mass., U.S.A.

Advertising Manager, Paul W. Alexander; Advertising Representatives, Walter M. Brauneiss, C. R. Keeley; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Midwestern Advertising Representative: Dwight Early and Sons, 221 No. LaSalle St., Chicago 1, Telephone, CEntral 6-2184. West Coast Advertising Representative: Dillenbeck-Galavan, Inc., 266 S. Alexandria Ave., Los Angeles 4, Telephone, DU 5-3991.

Subscription price $3.00 a year, in advance. Foreign Countries, $5.00. Single copies, 35c. Back issues 50c. Second-class postage paid at Pittsfield, Mass. Member of Audit Bureau of Circulation.

Copyright 1961
by Drug Markets, Inc., Vol. 89, No. 3.

By the publishers of ***Drug and Cosmetic Industry***

Beauty Fashion. The magazine of personal selling. Yearly subscription in the U.S.A., $3.00.

Drug and Cosmetic Catalog. Directory and data for manufacturers. Published every two years. $4.00 in the U.S.A.

Trade Mark Record and Supplements. Complete trade-mark listing of perfumes and cosmetics. $15.00.

Books. Technical information for manufacturers of drugs and cosmetics.

Feature Articles

287 **What Makes People Buy?**
by Peter Vautin
289 **Rose de Mai**
290 **The AMA and the Industry**
by Milton Moskowitz
292 **What Makes a Refillable Item Sell?**
295 **Trends in Product Development (*Part 2*)**
by Paul de Haen
297 **The Druggists Talk Back**
298 **Products For the Skin: Today's Potentials**
300 **Evaluating Aerosol Shave Creams**
by Phyllis Carter and H. M. Turax

Packaging and Selling

305 **Packaging Focus**
307 **That Sweet Smell of Success**
by Donald S. Tuttle, Jr.
309 **Market Research: Company Department**
313 **Packaging and Selling**
by Frazer V. Sinclair
315 **News in Packaging**
317 **News and Views**

Departments

273 **Keeping Posted**
by Joseph Kalish, Ph.D.
320 **New Products**
330 **News**
349 **Management Forum**
by Francis Chilson, Sc.D.
362 **Patents and Trademarks**
by Thomas Cifelli, Jr.
405 **Coming Events**
406 **Trade Literature**
408 **Industry's Books**
by Harry G. Kelbly

Technical Abstracts

by Joseph Kalish, Ph.D.

378 **Perfumer's Shelf**
389 **Advancing Therapy**
239 **Compounder's Corner**
395 **Skin Research**

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"Do you realize, Henry, It's been three years since you kissed me good-night?"

Keeping Posted

Obesity Market

According to a recognized authority on obesity, writing in *Courier*, published by the women's board of the George Washington University Hospital, it is estimated that the "relatively ineffectual, but highly touted methods of reducing," cost the American public approximately 2.5 billion dollars yearly.

This is quite a sizeable market, exceeding the retail volume of the cosmetic industry, and equaling 60 per cent of that of the drug industry.

European Drug Laws

Perhaps we can get a little comfort in this torrid climate of rules, regulations and investigations by taking a glance at what is happening in some European countries.

On August 1st, the first comprehensive drug legislation will go into effect in the German Federal Republic. It will include licensing for manufacturers, comprehensive labeling and registration, not only for manufacturers but distributors and importers of patent medicine, all to be enforced with what seems like extravagantly detailed and complex red tape.

Belgium has a new law which is aimed at setting a price ceiling on all pharmaceutical specialties sold in the country. Under this new regulation a wholesaler discount is limited to 12.5 per cent of the price to the pharmacist, and the pharmacist is held to 30 per cent of the retail price. The drug manufacturer's maximum price to the wholesaler will be based on cost of production; other costs and profits will be calculated on a fixed percentage mark-up of raw material costs plus taxes.

Oceanographic Research

An important long-range program of oceanographic research has been initiated where between 4 and 5 billion dollars will be spent in the next ten years exploring the oceans.

Immediate objectives are the search for chemicals, food stuffs and usable water.

Salt water occupies 71 per cent of the earth's surface. It is a miraculous, boundless, limitless source of natural wealth for most of the world. The limits of its resources—chemicals, plant, animal and fish life —are unknown. It would be wise of the pharmaceutical industry to keep this research program under close observation.

Merck Sharp & Dohme in Australia

Merck Sharp & Dohme International plans to build a new 1 million dollar pharmaceutical plant in Australia at the site of its chemical plant in a Sydney suburb. The company's Australian production increased threefold from 1956 through 1960, and, on the basis of the first six months, is expected to double in 1961.

Price Fixing and Monopoly

Dr. W.G. Malcolm, chairman of the board and chief executive officer of Lederle Labs., on charges of price fixing and monopoly, has stated: "Over the past ten years we have supplied an enormous mass of documentary material to various Federal Government agencies and bureaus which have investigated the antibiotics industry. Our employees, including company exceutives, have testified at length on this same subject before three different investigative bodies of the United States Government. During the Federal Trade Commission investigation, Cyanamid provided their lawyer-investigator with office space for three months and supplied him with more than 18,000 photocopies of various Company documents.

"Three of the investigations—by the Grand Jury, the Kefauver Subcommittee, and the Federal Trade Commission—are now going on concurrently. Others have included the Anti-trust Division of the Department of Justice and the Bureau of Economics of the Federal Trade Commission."

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Washington can never claim lack of complete cooperation from the industry, regardless of other accusations.

Expensive Business

How much money must a company in this industry earn to justify substantial research?

How much money is necessary to justify the risk of developing, producing and marketing new products?

The pharmaceutical business requires these speculations, because change and obsolescence are an essential part of the industry.

For instance, in 1957, Schering, then a leader in the corticosteroid market, achieved record sales and earnings with its Meticorten and Meticortelone. Three major competitors entered the field, causing Schering's earnings to drop 23 per cent in the next two years.

Lakeside Labs. set new sales and earnings records with its anti-spasmodics and diuretics until other companies introduced similar products causing Lakeside's earnings to drop 36 per cent. In 1959, the company reported a deficit of over $40,000.

Twenty-five years ago, Lederle Labs. owned the world's largest rabbit warren, holding 28,000 rabbits, from which the company was producing a new pneumonia serum. A nation-wide distribution system was set up and the costly research program was about to pay off—which it did—for 18 months. Then sulfa drugs, which did a better job, were put on the market, canceling out Lederle's serum market.

Even a decision not to market a drug can be expensive. At one time, Smith, Kline & French developed a new product to prevent vomiting and to control psychosis. A hundred internists, who tried it, found it to be excellent. Smith, Kline & French concluded, however, that it was not significantly better than others already on the market. And it was not completely free from the "side effects" which other similar products had.

This decision meant that three-quarters of a million dollars in research and development funds were wasted.

These are some of the things about the pharmaceutical industry that do not make the headlines.

More tooth paste

The new Ipana tooth paste, containing Hexa-Fluoride, and said to have a pleasant and refreshing taste, has an exclusive formula, claimed to be the first major dentifrice advance since the introduction of fluoride. According to the manufacturers, the new tooth paste:

"helps brush away the soft film that forms naturally on teeth before it hardens into gum-irritating tartar,

"has more decay-germ killing power than any other leading brand, according to laboratory tests, and according to the maker," and

"is said to strengthen the enamel of the teeth, as shown in laboratory tests."

The active ingredients in New Ipana are medically tested and approved. They are hexachlorophene (an anti-bacterial agent) sodium fluoride (a tooth-enamel-hardener that protects against softening action of organic acids) and sodium lauryl sulphate (an effective anti-bacterial and cleansing agent).

Mail-Order Prescriptions

Spiegel, Inc., a major mail order house, is going into the prescription drug business on a non-profit basis.

Under the plan, offered in fall-winter catalogs beign distributed this month, Spiegel's is setting up a pharmaceutical department to handle all prescription drugs except narcotics and barbituates. The company will fill prescriptions for credit account customers. The operation, to be handled by licensed pharmacists, will also fill veterinarian prescriptions.

"We expect to save customers from 25 per cent to 40 per cent from what they would pay elsewhere for these drugs," Mr. Spiegel commented. "Obviously, it is not intended for emergency cases but will render a vast savings to persons who take drugs over extended periods."

Spiegel's mark-up on the drugs will cover only costs for containers, shipping, handling and employes, the chairman said. "We set up the operation strictly as a service to our customers, although it is conceivable that some persons would become Spiegel credit customers in order to participate in the drug plan," he noted.

The drug operation is set up under a new Spiegel prescription drug foundation, chartered in Illinois. It will be managed by Anthony A. Indovina, a registered pharmacist who formerly directed the pharmacy of Oak Park Hospital here.

Other mail order concerns, including Sears, Roebuck & Co., Montgomery Ward & Co. and Alden's, Inc., said they have no plans to enter the mail order prescription drug business.

In adopting the operation, Spiegel's is resisting criticisms of some drug and medical groups, including the American Medical Association.

Prescriptions for Bricklayers

The Bricklayers Insurance and Welfare Fund has produced a comprehensive drug plan which will sharply reduce the cost of prescription drugs to 7,000 members of seven Bricklayer local unions and their families. Fifteen hundred neighborhood pharmacies in New York City, Nassau and Suffolk Counties have agreed to participate in the program.

Bricklayers and their dependents will pay a basic fee of 50 cents for each prescription filled. A copy of the prescription will be sent to the Fund which will pay the balance of the prescription cost to the phar-

macist. The plan will pay for all drugs, including insulin, prescribed by a medical or osteopathic physician or a dentist, but will not pay for any drugs sold over the counter without prescription, even when the prescription has been issued. The first prescription is limited to a ten day supply of the drug, to reduce waste and a registered pharmacist has been hired by the Fund to authorize more frequent and more plentiful refills where they are needed.

The schedule of prices that the participating drug stores will adhere to "are not at variance with prices usually charged by the average local pharmacy." The Fund is financed by a 5 per cent tax on the employers' weekly payrolls.

Drug Research Costs

A record $206.5 million investment in research was made last year by drug manufacturers. The new high was reached despite a general down-turn in profits, according to the annual survey on research and development made public by the Pharmaceutical Manufacturers Association. The 1959 figure was $197 million, and research expenditures for this year will rise to about $227 million.

An additional $5.4 million was spent in 1960 for research and development of veterinary drug products, and this figure is expected to rise during 1961 to $5.8 million.

More than ten per cent of last year's funds went into research outside company laboratories. The industry spent about $21 million to support studies in medical schools, hospitals and other research institutions.

Medicinal Chemical Imports

Imports of coal-tar medicinals and pharmaceuticals totaled 2.1 million pounds in 1960, with a foreign invoice value of $10.4 million. Imports in 1959 totaled 2.3 million pounds valued at $10.7 million, and in 1958, 1.5 million pounds valued at $7.2 million.

Principal sources of imports were West Germany, Switzerland, Italy, the United Kingdom, Denmark, Sweden, and France. Imports from West Germany totaled 578,000; from Switzerland 359,000 pounds; from Italy 299,000 pounds; from the United Kingdom 242,000 pounds; from Denmark 216,000 pounds; from Sweden 153,000 pounds; from France 118,000 pounds; and from the Netherlands 100,000 pounds. Other imports in 1960 came from Japan (33,000 pounds), Canada (4,000 pounds), and less than 1,000 pounds each from Israel, Cuba, Austria, Mexico, Belgium, the Philippines, Yugoslavia, Rumania, India, and Norway.

In terms of quantity, the most important coal-tar medicinals and pharmaceuticals imported in 1960 were p-aminosalicylic acid and salts, sulfanilamide, phenacetin, sulfathiazole and sodium salt, ephedrine base and salts, and sulfaguanidine. Imports of p-aminosalicylic acid and salts, which amounted to 501,000 pounds, came chiefly from Italy, Switzerland, Sweden, and West Germany. Imports of sulfanilamide, which totalled 313,000 pounds, came chiefly from the United Kingdom, Denmark, and West Germany. Most of the imports of phenacetin, which amounted to 227,000 pounds, came from West Germany, the Netherlands, and Denmark. Imports of sulfathiazole and its sodium salt, which totalled 108,000 pounds, came mainly from the United Kingdom, Italy, and Denmark. Imports of ephedrine base and salts, which amounted to 76,000 pounds, came principally from West Germany. Italy and Denmark were the suppliers of sulfaguanidine, imports of which totalled 76,000 pounds.

Other imports include calcium acetylsalicylic urea complex (36,045 pounds), glycol monosalicylate (31,350 pounds), isoniazide (28,682 pounds), phenobarbital (42,985 pounds), procaine hydrochloride (68,404 pounds).

Synthetic Aromatics Imports

Imports of coal-tar flavor and perfume materials in 1960 totaled 749,000 pounds, with a foreign invoice value of $1,226,000. Imports in 1959 amounted to 560,000 pounds, valued at $865,000, and in 1958, to 391,000 pounds, valued at $610,000.

In terms of quantity, Canada, Japan, and the Netherlands were the principal sources of U. S. imports of these materials as a group; smaller quantities came from the United Kingdom, France, and Switzerland. In this group the two most important items imported in 1960 were saccharin and vanillin. Imports of all forms of saccharin in 1960 totaled 251,000 pounds, compared with 321,000 pounds in 1959; imports in 1960 came from Japan and the Netherlands. Imports of vanillin in 1960 amounted to 377,000 pounds, compared with 153,000 pounds in 1959. Canada was the principal supplier of vanillin derived from lignin and the Netherlands was the principal source of vanillin derived from eugenol.

Other imports include musk ambrette (11,970 pounds), musk xylol (71,050 pounds), piperonal (24,880 pounds).

British Pharmaceutical Expansion

The third annual survey of expansion in the British pharmaceutical industry by *Manufacturing Chemist* reveals expenditure for recent or new projects of 8.0 million pounds sterling ($22.6 million). Twenty-nine firms reported expansion, compared with 31 last year and 21 in 1959. Only expansion projects in the United Kingdom were reported; some of the major expenditures, in pounds sterling, follow. Abbott Laboratories, 2.5 million for land and buildings, 500,000 for new plant, including 1.5 million reported for last year; British Drug Houses, 600,000 over two or three years; Glaxo, 40,000 for vitamin A production; Imperial Chemical Industries, 4.0 million; Smith Kline & French, 550,000; Stafford Allen. 125,000; Upjohn, 700,000; Wellcome Foundation. 1.2 million. •

WHAT MAKES PEOPLE BUY?

BY PETER VAUTIN

Almost every woman in America uses some type of cosmetic. Most use several regularly. But precisely who is the greatest user of each kind of cosmetic and how does age, income, where she lives and what she does influence her cosmetic usage and the frequency of use of any one cosmetic?

East, West, North and South, America has been probed by market and product surveys. Cosmetic manufacturers alone spent more than a quarter of a million dollars last year to find out what the people who buy their products want for their money. Their surveys shed light on the variables that determine the most effective ways to plan advertising, marketing, production and research projects.

How important is the opinion of the average American woman about cosmetics? All-important, of course. No matter how curious and variable her likes and dislikes, they are the determining factor in sales. Consumer testing is no longer looked on as a doubtful luxury. Because of this, it is no longer a question of giving her a product and making her like it. She has become more expert in her choice and use of cosmetics through her trial samples, and, interestingly enough, through answering consumer research questionaires. A broad dissemination of cosmetic and fragrance information, partly in advertising, partly in the mass media, has also given her further sophistication.

In the light of this, retailers and manufacturers should know more about the variables that govern their products' success or failure on the market. Some parts of the country and some types of individuals are better customers, either because of over-all use of cosmetics or for the regular use of a particular cosmetic. It becomes increasingly important that these questions be answered.

Sound like a riddle? Not at all. You'll find women using cosmetics from the hills of Tennessee to the banks of the Mississippi, whether they can afford them or not. If you were to visit the remotest home on Tobacco Road, the padded room of a state asylum or a tenement apartment in our worst slum, you would find women using cosmetics of one sort or another.

Every woman who steps up to a cosmetic counter is a challenge to an informed cosmetic sales detective. A crystal ball seems in order but, lacking one, we must find a formula, a sensible, useful guide that will enable us to have a look at her.

The following appraisal of the best customer for certain cosmetics is the result of a number of surveys, and gives an indication of who the best customer is for particular cosmetics. It would be unwise to be dogmatic, but the trend is definite, if not completely foolproof.

Let's take a look at your best customer in terms of her cosmetic preferences.

Lipstick. Age, income and geographic location are the important considerations here. Frequency of regular use and use of numerous shades should also be kept in mind, and the questions of who looks for new

shades, new cases, new gimmicks and who wears a different shade for every costume and occasion.

Young women between 18 and 24 use lipstick 8 per cent more often than younger and immediately older women. Women over 55 use lipstick 30 per cent less frequently.

Income and social position are important. Women whose family income is $10,000 a year or more use a lipstick 6 per cent more frequently than those whose family income is between $7,000 and $10,000. Women with family incomes under $4,000 use lipstick 8 per cent less than the $10,000 group. Upper-class users buy 9 per cent more lipstick than middle-class users.

Single women use more lipstick, and those in school with greater leisure, use lipstick more often than working women and housewives.

The Pacific Coast, best of all territories, has a 16 per cent advantage over the poorest territory.

On the basis of these findings, your best lipstick customer—one who has from two to four sticks and uses them four times a day—is a young woman 18 to 24 years old, in a family with an annual income of $10,000 or more. She is single, still in school and lives somewhere on the Pacific Coast. This customer buys over 30 per cent more lipstick a year than the average woman.

Rouge. This cosmetic has been with the human race for a long time. In early America it was known as "Chinese Wool" and "Spanish Red." For our purposes rouges of all types are included.

Age is a vital factor. Women aged 40 to 54 are the big rouge consumers—more by 2 per cent than women over 55, and more by 29 per cent than women between 18 and 24.

In contrast to lipstick users, the big users in terms of income are the $7,000 to $10,000 annual income group. The upper classes in this category use much more than those of the lower class.

Married women use nearly twice as much rouge as single women; employed women and those who stay at home use about the same. Girls still in school tend to be low users, consuming a third as much as the employed group.

The east south central states use 80 per cent more than the Pacific Coast, and 69 per cent more than New England and middle Atlantic states. Women in larger cities use more than those in smaller towns.

Your best customer for rouge is a woman between 40 and 54 years of age with a family income of from $7,000 to $10,000 annually. She is upper class, married, employed and lives in Kentucky, Tennessee, Alabama or Mississippi. She is most likely to live in a larger city.

Eyebrow Pencil. Here we see the variations. Your best customer for eyebrow pencil is a very different woman from your rouge customer.

She is 18 to 24 years old. She uses the cosmetic 64 per cent more than the women in the 40 to 54 year group.

If her family income is $10,000 annually, she will use 14 per cent more than a woman with a $7,000 family income and double the amount used by a girl in the $4,000 family group. Social activity and social position play important roles in the use of eyebrow pencil.

The big user of eyebrow pencil lives in a big city or town in the Mountain states of Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah or Nevada where the women use 46 per cent more eyebrow pencil than an equal number of women in the east central southern states.

Hand Cream. Your best customer for a hand cream is a young woman 18 to 24 years of age. She uses 16 per cent more hand cream than the woman in the 40 to 54 year age group and 26 per cent more hand cream than a woman over 55.

She is probably married (married women use 7 per cent more hand cream than single women) and employed. If she is married and employed she uses 9 per cent more than a single woman who is still in school.

The west south central states are the big users. They account for 7 per cent more than New England and 14 per cent more than the Middle West.

Smaller cities mean greater use. Cities of from 150,000 to 250,000 population seem to have the most enthusiastic users of hand creams. Women in cities of this size, all other factors being equal, use 21 per cent more hand cream than women in cities of one million or more and 16 per cent more than the women in cities of 50,000.

The ardent user of hand cream is a woman 18 to 24 years old in a family with an income of between $7,000 and $10,000, in the upper class, married and lives in a medium-sized city in one of the south central states.

Cold Cream. Preparation of cold cream began with Galen, a Greek physician who lived during the second century A.D. It was prepared then in much the same way it's prepared today. It is a product used more by older women than younger women.

It's used twice as much by women who are between 40 and 54 than by women under 18 years old, and 40 per cent more than by women under 40.

Family income is not a major factor in determining the use of cold cream. There is only a 6 per cent variation among all the income groups.

Married women use 7 per cent more than single women. Women who are employed use 4 per cent more than housewives and 15 per cent more than girls still in school.

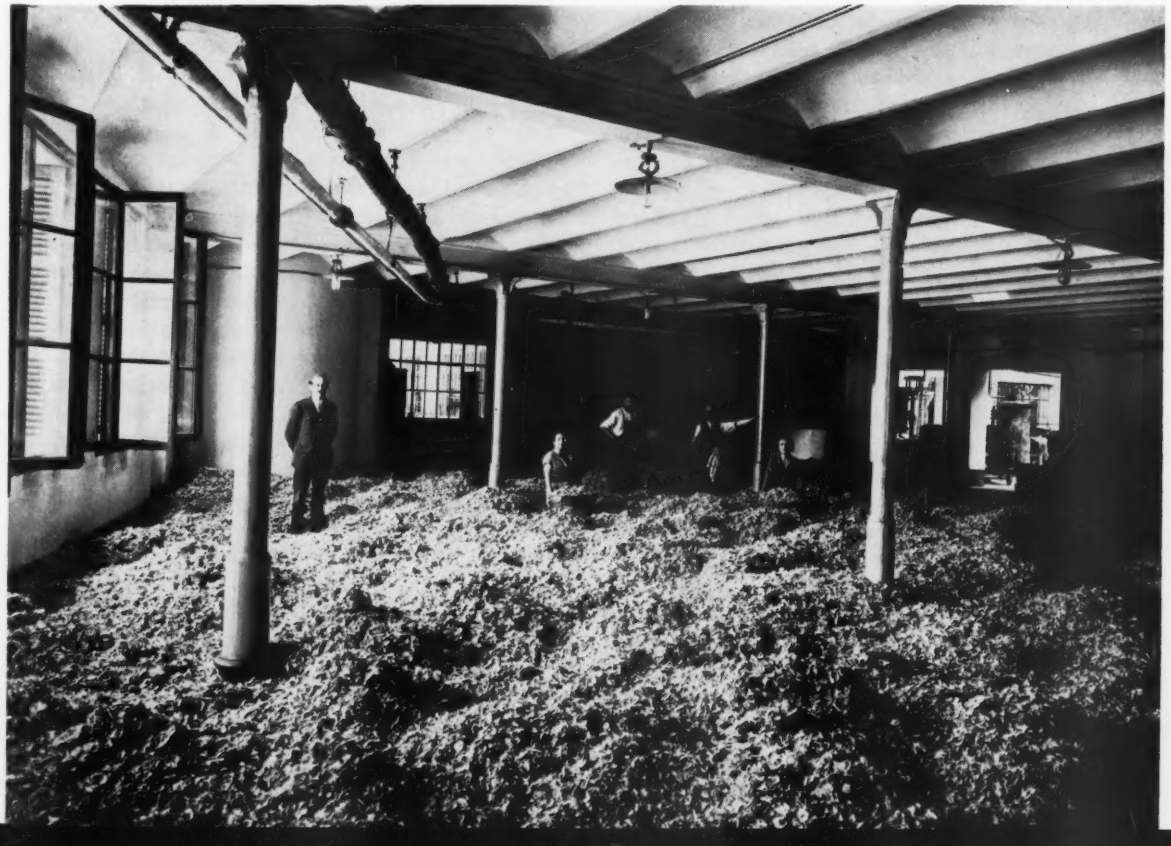
The mountain states are your best cold cream market. Women in these states use 22 per cent more than women in a similar group on the Pacific Coast and

(*Continued on page 365*)

Rose de Mai . . .

Rose de Mai, a large light pink or purple-red rose, *Rosa Centifolia*, is cultivated in the Grasse region of France (above), and extracted with volatile solvents, principally petroleum ether, yielding the concrete and absolute of rose.

Plantings begun in late fall are harvested during May of the second year, in very early morning before the dew has disappeared, reaching their maximum in the fifth year, and lasting about six more years. The petals are quickly transported to the factories and spread out on the floors (see below) before treatment. Photos courtesy of Antoine Chiris Co., Inc.



THE AMA AND THE INDUSTRY

BY MILTON MOSKOWITZ

Faced with the alternatives of increased regulation by the government or increased supervision by the AMA, there is no doubt that the pharmaceutical industry will cast its lot with organized medicine. But the image organized medicine presents to its public becomes less attractive, and should be a cause for concern.

The American medical profession, like the U.S. drug industry, is under sharp attack these days. The profession seems to have lost its benevolent-Jean-Hersholt-type image. Hollywood is no longer making the Dr. Kildare pictures. National magazines such as the *Saturday Evening Post* carry cover articles asking how we can get rid of bad doctors. A grocery magazine that goes into millions of homes features a cartoon showing a doctor at a bedside opening a bag stuffed with greenbacks, the caption reading, "Oops, I must have picked up the wrong bag." Books appear regularly attacking the American Medical Association as a group primarily interested in safeguarding the income of doctors, not the health of the nation. The notorious practice of fee-splitting has been widely publicized. The AMA holds its annual convention in New York and the biggest story to come out of the meeting is an angry, ugly squabble between the AMA and Dr. Jonas Salk over the oral polio vaccine. Finally, Sen. Estes Kefauver, hot on the trail of the drug industry, gives the AMA a hard time on the witness stand in Washington.

In short, it is likely that never before in its history has organized medicine in this country faced such a frontal attack. And it is also likely that never before has the prestige of the medical doctor been at such a low ebb.

The troubles of the medical profession are naturally of great interest to drug marketers, who must market their products through this medium. The distribution of ethical drugs is unique in industry. Like other companies, drug manufacturers sell their output to the general public. However, the public has no say in determining which products are to be bought. This decision is made by the doctor and it is therefore the medical profession rather than the consuming public which represents the "market" of drug manufacturers. As a matter of fact, one of the many charges leveled against doctors is that they have become too obliging a market. Critics contend that the drug industry has made suckers out of doctors.

Since the doctor represents the customer, it is unlikely that anyone within the pharmaceutical industry would join this chorus of dissent. On the contrary, manufacturers are interested in closing ranks with the medical profession to pose a united front against the critics. The AMA's testimony opposing the Kefauver-Celler bill was highly welcomed by the industry. Nevertheless, it might be well for the industry to examine carefully the arguments raised against organized medicine and to see whether it wishes to be identified in all instances with the policies of the American Medical Association.

It is clear, for example, that the AMA's heated opposition to medical care for the aged under the Social Security system may not be in the best interests of pharmaceutical manufacturers. The AMA rarely likes to admit it, but there are elderly citizens who are often strapped by economic circumstances and who therefore find it difficult to pay for needed drugs. An insurance system whereby such needy persons would be able to obtain the best medication is not particularly unAmerican and it would certainly widen horizons for drug marketers. Traders on the New York Stock Exchange obviously recognize this fact of economic life. When the Kennedy administration submitted its plans for medical care to the aged, there was an anguished cry from the AMA in Chicago—but shares of drug companies rose sharply.

The AMA, the drug industry should be aware by

now, has antagonized large sections of the public by its policies in this area. For example, the AMA recently became embroiled in a silly hair-pulling match with such an influential body as the National Council of the Churches of Christ in the U.S.A. This organization, representing all demoninations of the Protestant church, went on record in favor of the social security approach to medical care for the aged. The vote by the NCC's General Board was described as "unanimous." Dr. F. J. L. Blasingame, executive vice-president of the AMA, then entered the picture. He wondered about that "unanimous" decision because the newspaper story he read said that only 87 of the 250 members of the NCC General Board were present for the vote; he also wanted to know whether the absent members of the board had concurred in the resolution. The Rev. William J. Villaume, executive director of the NCC, replied to Dr. Blasingame that this particular resolution had been considered by two NCC departments over a three-year period and had been approved each time without a dissenting vote; he also noted pointedly that an advance draft of the resolution had been sent to all 376 members of the general committees of the two departments. The Rev. Mr. Villaume added that when the NCC's General Board took its final action earlier this year there were present 105 voting members, representing 23 member denominations. The resolution, he said, passed "without so much as one dissent or one abstention."

Dr. Blasingame has also ventured to question whether the NCC constitution permitted it to testify before Congress on "controversial, secular legislation" as a representative of all the Protestant churches affiliated with the Council. The Rev. Mr. Villaume replied that the NCC does indeed have this right and he added:

"The National Council of Churches is a representative body. It is governed by a General Assembly, and between meetings of the Assembly by a General Board. These bodies are made up of the elected representatives of the churches. They are sent to deliberate and decide upon matters regularly brought before them by members of the Assembly or Board, by denominations, and by representative committees, departments or divisions. The pronouncements, resolutions and the actions of the General Assembly or General Board have the authority of being actions of a *representative assembly* constituted by the member denominations; no more, no less.

"Testimony given at public hearings is presented precisely as the action of a representative assembly, not as the action of any other body. It is not presumed that the Council's actions reflect the views of all members of all constituent churches, even as the acts of Congress do not reflect the views of all citizens and the actions of the AMA do not reflect the views of all physicians."

Dr. Blasingame is probably still licking his wounds from this retort.

There is mushrooming evidence that many sections of the American public have become fed up with the AMA crying "socialism" every time the government or labor unions make some plans to provide health services. It seems that the AMA is intent on maintaining a monopoly in the field of health care. It costs some $12,000 for a student to go through medical school, but the AMA calls it "socialism" for the government to extend a helping hand. The AMA is today blamed in many quarters for the fact that fewer and fewer people are applying for admission to medical schools. Nothing escapes the nervous eye of the AMA. When Spiegel Inc., Chicago mail order house, recently announced that it would include prescription drugs at cut-rate prices in its fall-winter catalog, the AMA felt constrained to point out that "the unorthodox practice of mail order filling of prescription drugs is not in the best interest of the patient." Now what in the world is wrong with a diabetic who has to be continually taking drugs sending his doctor's prescription to Spiegel's to be filled at a cost lower that he can get at his neighborhood pharmacy?

One interesting facet of the current debate over the Kefauver-Celler bill is that the AMA is now trying to interject itself more forcibly as the broker between the pharmaceutical industry and the doctor. The AMA opposes the Kefauver plan to give more powers to the Food & Drug Administration over regulation of drugs. Instead, the AMA is rushing in to fill what it agrees is a void by expanding its drug information program. One key part of this program will be publication of a comprehensive handbook on drugs that will contain all information on efficacy, side effects and other characteristics. In normal times, this activity by the AMA might raise the hackles of the pharmaceutical industry. It brings to mind the Seal of Acceptance program which the AMA's Council on Drugs maintained for 58 years prior to 1955. Under this program, no ad could appear in the *Journal of the American Medical Association* unless it had the seal of approval. This had long been a bone of contention between the industry and the AMA. Drug companies objected to this AMA censorship. As Sen. Kefauver was quick to point out, once the seal program was dropped, JAMA's advertising income soared from $2,135,000 to $4,100,000.

Under present circumstances, however, no protests about expanded AMA operations in this area are expected from the pharmaceutical industry. Faced with the Scylla and Charybdis alternatives of increased regulation by the government or increased supervision by the AMA, there is no doubt that the industry will cast its lot with organized medicine.

Of more importance to the pharmaceutical industry than its relationship with the AMA is its relationship with individual doctors in their every-day

(*Continued on page 326*)

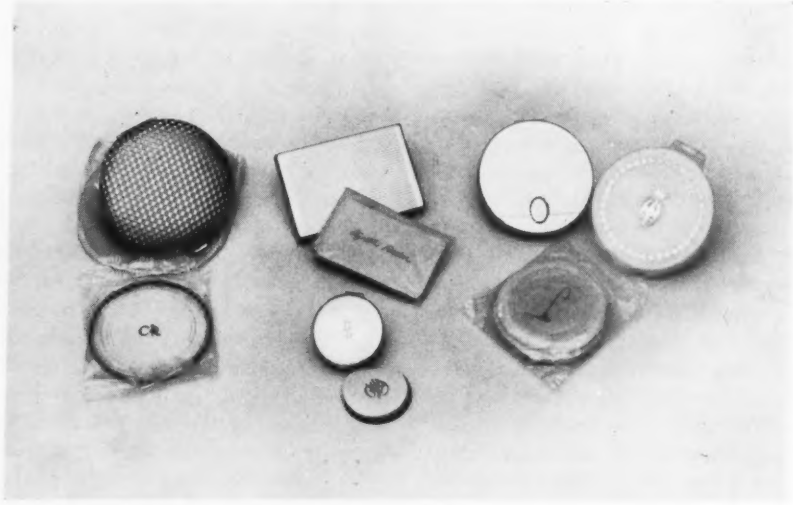
Fragrance refills have come a long way, as these packages show, left to right: Lanvin's Arpege perfume mist, case by Cartier, with metal refill, and Eau de Lanvin mist in black and gold, plastic coated glass refill; Marcel Rochas' Madame Rochas brown and gold Pursatomizer, metal refill; Angelique's Black Satin spray cologne and perfume atomizer, in black and gold, cologne with glass refill, perfume, metal.

What Makes a

Refill packages satisfy a definite consumer need, but they offer unique packaging problems.

The combination of beauty and utility is especially tricky in the packaging of refill fragrances and cosmetics. In the first place, beautiful packaging is essential to the success of either. What woman would have any unattractive item around the house if she could help it? Even appliances have been designed in cheerful pastels to make her surroundings more pleasant. The public has come to expect its cosmetics and fragrances to be elegant, with the result that cosmetics and fragrances in plain packages are less and less successful in the marketplace.

One perfume house known for the elegance and beauty of its packages put two perfumes on the market a few years ago in plain, stock bottles enclosed in plain cartons. They were advertised and promoted vigorously; it was thought that they would be popular because of the savings offered through inexpensive packaging, but it didn't turn out that way. Despite the saving and the known quality of the



Compacts, an excellent refill cosmetic item, now that cases are protected—from left to right: golden basket weave compact by Charles of the Ritz, with protective cloth case; Dorothy Gray's gold rouge compact (front) with refill; rectangular pressed powder compact by Elizabeth Arden (rear) in gold, with refill; Coty's French Flair compact in gold and (right) in a white plastic case, with refill to fit both.

Modern eye makeup refill packages show ingenuity: Dorothy Gray's gold combination eye liner and eyebrow pencil (left)—both have refills; Elizabeth Arden's mascara with refill (above) and eyebrow pencil (below) with removable sharpener and refill; Coty's Duo-Matic (right) in black and gold, the crayon at one end, liquid mascara at the other, the mascara refill in the tube and crayon refill in plastic container.

Refillable Item Sell?

perfumes, which were made, bottled and sealed in France, they did not sell, largely because of the plainness of the packages. And the retail trade resented the introduction of drab packaging and a low unit price.

Beauty is necessary, then, but it is costly. Expensive packaging has always been a problem to the perfumer. Women will not buy a product as often nor use it as frequently if its cost is excessively high because of the packaging. Such packaging limits a product's market to gifts and to the wealthy few. Besides, women have an aversion to throwing away a beautiful container. However, less expensive packaging is not the manufacturer's remedy; it just doesn't help to make the package less attractive, nor does competition offer him a choice in this respect.

Manufacturers have turned to the refillable container for a solution to this problem. It has a real, psychological merchandising incentive behind it: The refillable container allows the manufacturer to present his fragrance or cosmetic in an attractive package without its appearing impractical to the

Five of the modern refills that have solved the problems of refillable lipsticks, left to right: Revlon's sterling silver Futurama lipstick by Van Cleef & Arpels, Click refill; Coty 24 Switch Stick in white and black, refill in pink plastic case; Yardley's black and gold case, refill with plastic top; Arden's Click Change lipstick, refill in clear plastic; Dorothy Gray's Satura, silver case, with plastic refill.

Two approaches to the fragrance refill package: (left) Chanel's refillable purse atomizer, which is filled from the crystal bottle that can be used at home. Plastic funnel is included. Spray cologne package (right) holds the original case and plastic-coated glass refill bottle.

economy-minded woman. In making a careful calculation of the *real* value of a product, she realizes that she can spend more money because of the refillable nature of the container—it is both a beautiful and a practical buy. This also overcomes her natural aversion to throwing away a beautiful container.

On the other hand, the nature of the refillable container, a woman's cosmetic budget, and other variables will determine whether she will actually buy a refill when her original supply is used up. These considerations cause wide variance in the ratios of originals to refills sold. Some lines sell three originals for every refill sold. Other lines sell four refills for every original sold.

Price is important. The greater the value of the original case, the greater will be the incentive for the buyer to look for a refill. But, if a case has become marred or scratched, if the price difference between the original and the refill is small, if she is tired of her present brand or fragrance and wants to try another, she will throw away the whole thing and buy a new, full item. The psychological value of a refill is great at the point of sale, then, but becomes less influential as time goes on.

The mechanical shortcomings of some earlier refillable cosmetic and fragrance products have been remedied. All the same, the bad publicity these earlier packages drew has made selling the improved packages a little harder.

Refills for lipsticks, for instance, were once messy to replace. Sales girls spent more time cleaning their hands than they did selling refills, or the consumer vowed never again, as she dug out lipstick with an orange stick. This has been overcome by designing a refill that can be easily snapped into place, making refilling a simple and clean process.

Many refillable compacts became so marred and scratched by the time the original powder was gone that women preferred to buy new ones. Now, refillable compacts are coated with lacquer to protect the original finish, or a brush stroke effect in the metal itself makes scratches hardly noticeable. Cloth covers included with the original compact also protect the beautiful finish. Replacement is very simple. Refillable compacts for pressed and loose face powder, rouge and foundation makeup are now represented in most lines. New puffs with each refill are an added convenience for the buyer.

Refills for mascara and eye liners are now much superior to the old ones. They had a tendency to dry up and cake, making refilling messy. In containers having liquid mascara at one end of a cosmetic pencil and eye liner or eye pencil at the other end, the case was not sufficiently air-tight to prevent evaporation. This has been remedied and more convenient methods of refilling the liquid mascara portion of the pencil have been marketed. One manufacturer provides a new full container of liquid mascara to replace the entire lower portion of the pencil.

Refillable fragrance sprays and aerosols had mechanical imperfections. Bottles broke easily, the valves became sticky and difficult to operate and women began to look on them as unpredictable at the very least.

Plastic coating of the inner aerosol container has eliminated the fear of breakage. Vents in this coating allow the vapor to escape, with release of pressure, eliminating any possible danger, should the container be broken.

In some instances, too much of the fragrance was dispensed, causing a wasteful cloud to cover the user. This is overcome by metered valves.

The newer refills for aerosols and sprays are simple to insert. The bottle is placed in the lower portion of the original container, the top of the case is put on over the neck of the bottle and the button for the valve is placed over the extended pipe of the valve. In the better packages, the bottom of the bottle is protected on the inside by a felt or cloth pad.

What does the average woman want in the way of refillable cosmetics and fragrances? Economy, simplicity and cleanliness are the most important. Consequently, refillable solid cosmetic products met with immediate success. Most refillable liquid items have had a harder time.

Often, the consumer must be sold on the safety,

(*Continued on page 343*)

This is the second and final part of Mr. de Haen's discussion of drugs developed during the last three years. Part one appeared in our July issue.

TRENDS in Product Development

BY PAUL DE HAEN

Hormonal Disorders

The production of corticoid hormones during the last 11 years is another typical example of the way a basic discovery leads to many derivations. Today, some 11-odd derivatives of cortisone are available, the latest being Celestone (betamethasone-Schering) and Haldrone (paramethasone-Lilly). None of these is applicable for every condition in which steroids are used, and the physician must select the one best suited for a given patient and a given condition. This situation does not necessarily ease the lot of the physician. Dosage by weight has constantly been reduced, but side effects, even if they are of a lesser extent, are still troublesome and require constant watching of the patient. None of the steroids will cure arthritis, they will only ameliorate it. Much more basic research is needed before we can hope to prevent and cure this debilitating disease.

There have been further developments in the synthesis of androgenic anabolic hormones. The purpose of their administration is to increase nitrogen retention in the form of proteins, to improve muscle and bone mass and to increase weight. These actions are particularly important in elderly debilitated patients and in patients recovering from serious illness, as well as in osteoporosis. There seems to be a higher incidence of osteoporosis in women than was formerly assumed. With an increase in the number of aged

people, we can also foresee an increased demand for these drugs in this area.

A substantial future use can be expected from the 19-nor steroid hormones. One of these progestational hormones, Enovid (Searle), can now be prescribed by the physician for the long-term cyclic administration for the inhibition of ovulation, if medical reasons require such use. Other hormones will no doubt be developed for the same purpose.

Judging from reports in the literature, oral antidiabetic therapy is continuing to receive a great deal of attention in medical circles. The last word has not been spoken in this realm of therapy, either, and new products are in the research stage. There is a suggestion that Orinase might prove useful in the management of multiple sclerosis, but this requires further study. A contaminant of insulin, glucagon has been purified and crystallized by Eli Lilly and Company. It is suggested that glucagon is a regulator of insulin

function. The main clinical indications of glucagon are severe hypoglycemic reactions that may occur during insulin therapy of the labile diabetic or during insulin shock therapy.

Antibiotics

We sometimes think we can lick nature, but we usually cannot. This is especially true if a live organism is involved, which may change from one form to another. Although the development of sulfonamides and antibiotics has enabled physicians to combat infection and save many lives, new and serious unresponsive infections have made their appearance during the last few years. There will, therefore, always be a need for the production of new antibiotics, especially those effective against resistant bacilli.

There have been a number of interesting developments in the antibiotic field. First, the Beecham Group in England succeeded in producing the basic nucleus of penicillin, 6-aminopenicillanic acid, by interrupting the fermentation process at a given moment. This method makes it possible to use this material as a starter for the production of innumerable other penicillins with different side chains. Several thousand derivatives have been made. So far, but two products made according to this process have been marketed. These are Syncillin (potassium phenicillin-Bristol) and Staphcillin (dimethyloxyphenyl penicillin-Bristol). The latter is especially indicated for the treatment of resistant staphylococcic infections and should be reserved for this purpose. In the tetracycline group of products, Declomycin (Lederle) became available. This antibiotic has a great stability in body fluids, a low order of toxicity and a low rate of renal clearance, and is effective in 40 per cent of the dosage of other tetracyclines.

Cancer Chemotherapy

Considerable effort is being made to find a chemotherapeutic agent that will inhibit the growth of cancerous cells. Thousands of compounds have been and are being screened for this purpose. Perhaps some 150 are now under clinical investigation. This work is handicapped by the fact that we still know so little about the cause of cancer. The primary effort is therefore directed toward finding compounds that have a toxic action on cancer cells. Unfortunately, such drugs produce undesirable systemic toxicity. To avoid this toxicity is the present endeavor. Some progress has been made, but we are still far from the desired goal. Lives have been prolonged and the suffering eased, but a cure is nowhere in sight. Most of the studies have centered around the use of alkylating agents. Each new one promises to be a little more effective and a little less toxic. Practically all the major pharmaceutical houses are engaged in this type of research, and several have received grants from the National Institutes of Health for the screening of new compounds. Eli Lilly observed that the alkaloid of *Vinca Rosea* Linn, vinblastine sulfate, appears to be useful for the treatment of Hodgkin's disease and for the palliative management of some malignant neoplastic conditions, especially the relatively rare condition choriocarcinoma. This drug is known as Velban.

Recently a great deal of publicity has been given to the theory that virus infections may be a major cause of cancer. If this should prove true, an entirely different approach to the treatment of cancer will be required.

Analgesics, Narcotics and Anesthetics

Ever since Serturner isolated morphine in 1806, attempts have been made either to extract new agents from other plants or to synthesize new compounds which are nonaddicting. This goal has not been achieved as yet even with the recently developed products such as Numorphan (Endo), Alvodin (Winthrop), or the benzomorphan derivative phenazocine,

(Continued on page 327)

The Druggists TALK BACK

"The Drugstore: Outlet or Bottleneck," the article by Milton Moskowitz which appeared in our June issue, made the following points: Druggists get a substantial mark-up from the sale of prescription drugs in exchange for little professional or selling effort. They discourage price competition, insist on a protected market, and suffer from increasing competition from supermarkets, discount houses and mail-order prescription sales. Apparently Mr. Moskowitz touched a sore spot, and the response has been quick and loud. Here we reproduce a sampling of letters, and the author's reply.

In regard to Mr. Moskowitz's article . . . it is obvious that Mr. Moskowitz's knowledge of retail pharmacy is rather limited, and that he is interested in the manufacturer and his product only, but in nothing else.

"Mr. Moskowitz does not seem to realize that it is the job of the pharmacist to fill prescriptions, whether they be compounded or not. The fact that medication may be placed from one container into another container in order to be dispensed still does not release the pharmacist from his legal responsibilities, one of which is being responsible for the correct dosage of the medication the patient is receiving. I disagree that a prime factor in the price level of drugs is the 40 per cent markup by the pharmacist. One of the main reasons for this markup is financial necessity. The manufacturers have a captive audience in the form of the drugstore. The pharmacy must purchase the legend drug which is being detailed on the chance he may receive a prescription for it. The manufacturer usually packages the medication in bottles of 100, etc., and we have to wait for a prescription for possibly twelve tablets. Once this bottle has been opened, in most cases it is not returnable. We cannot sell this medication to another customer. We have to wait for another prescription, which may take quite a while, during which time the initial investment in this medication has not been covered. We also have to carry identical drugs which are made by different manufacturers, thereby increasing inventory. . . .

"I am sure that many manufacturers would like to get their over-the-counter products out of the drugstores and into other channels of distribution to further their own economic gains, but there are legal restrictions to protect the consumer against this. Part of our job is the protection of the consumer.

"The author states that 'one of the cardinal virtues of the American economic system is supposed to be competition.' He believes drugstores should compete on price. Why don't the manufacturers compete on prices? . . . I might point out that drugstores do compete on price, and they also give professional service in their transactions, which is something that is not prevalent in the author's example of a discount pharmacy. If every pharmacy were to be a discount pharmacy, the small drugstore would go out of business, as discount operations can exist only in highly populated areas among other places, due to their dependence on large volume selling. Discount pharmacies and mail-order houses cannot provide the proper services that should be provided in a drugstore. They are not open late hours, and do not spend time with the customer who in many instances comes to the pharmacist at the first sign of illness for advice before going to the physician.

"Mr. Moskowitz should spend some more time studying retail pharmacy before he decides that he knows all about the topic and can write a major article of this type."

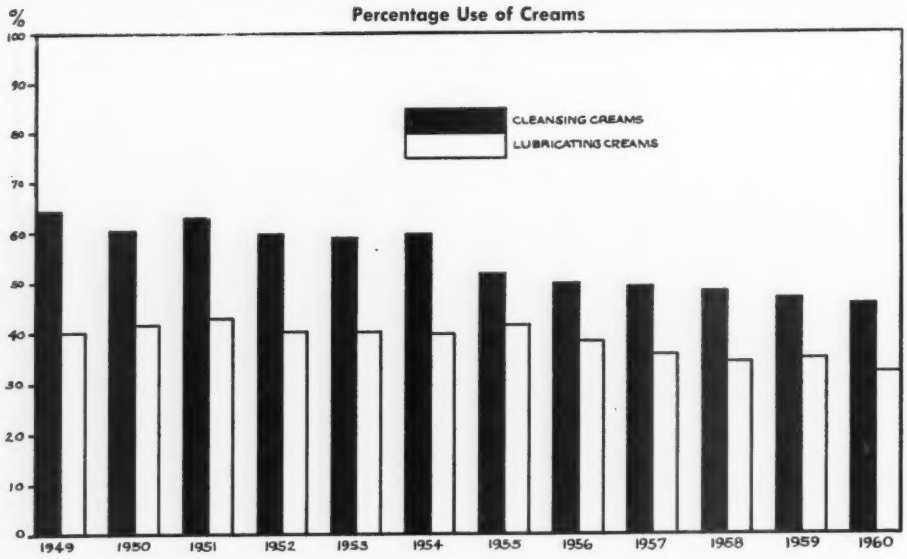
Harry N. Habler, R.Ph., New York City

A very similar letter was written by Saul Cohen, R.Ph., also of New York City.

"I have just read the article written by one Milton Moskowitz on 'The Drugstore' in your June issue. I want to object to the nature and tone of this journalistic clap-trap. I am not acquainted with Mr. Moskowitz's qualifications for pontifications on this subject since you evidently did not feel them important (or sufficient) to identify him in a footnote. . . .

"I want to acquaint Mr. Moskowitz with a few facts in the distribution of drugs; facts which he either ignores (or is ignorant of). . . . I wish Mr. Moskowitz had revealed the fact that the retail pharmacist must open market packages in order to sell their contents piecemeal; that he must prepare individual packages and identification labels for each customer each time the prescription is filled; that he risks the probability that an appreciable portion of that market package will eventually remain unsold; that he must supply packaging materials for each such piecemeal subdivision of the market package; that he more often than not either delivers the

(Continued on page 383)



PRODUCTS FOR THE SKIN
Today's Potentials

Another in the series of reports on the market potential of the products of the cosmetic industry compiled by our editorial staff, this article considers products for skin care.

Market data for cosmetic products used in care of the skin indicated a large potential for future sales growth. Their use by different age groups, by social and economic groups and in geographical areas, all show substantial opportunities for sales expansion.

Most remarkable, in this particular group of cosmetics, is the difference in the number of women who make occasional use of these products and the number of women who are regular users. This wide gap, which appears in all groups and geographical areas can only mean that a remarkable sales opportunity is available for the right amount of advertising and educational work by the trade.

The truth is, however, that cosmetic products for the skin and, particularly the cold or cleansing creams and the night lubricating creams, have had an unhappy history in cosmetic marketing.

Numerous surveys show a steady declining percentage in use over the past ten years. During this period, when such cosmetic products as those for the hair, deodorants, and colognes have shown a vigorous and substantial increase in consumer use and in dollar sales, skin treatment products are being used regularly by fewer women than they were ten years ago.

This is a remarkable market situation because it exists in spite of the fact that more extensive, persistent and intelligent sales education has been devoted to skin care and to the products for skin care than to any other branch of the cosmetic industry.

It might well be said that the entire demonstration system now employed in the cosmetic industry originated and grew, primarily because of skin products. The great treatment houses, which did so much to build up prestige and glamor in the cosmetic industry, which set the pace and gave such vigorous leadership to every other branch of the industry, were vitally associated with skin treatment products.

Products for the skin now comprise a retail sales volume of $138,300,000 annually. This is the estimated figure for 1960. Included in this group are cleansing creams at $51,300,000, foundation creams, $11,000,000 lubricating cream, $30,600,000 liquid face creams, $20,800,000 and other creams, $24,600,000.

The accompanying tables are compiled from several extensive surveys. These tables emphasize the wide variation in the percentage of use among those women who use these products occasionally and those who are regular or consistent users.

TABLE 1, which shows differences in use in the different age groups, is confined entirely to regular

(*Continued on page 374*)

TABLE 1

Percentage of Regular Use by Age Groups

	All Ages	14-18 Years	18-25 Years	25-40 Years	40-55 Years	55 and over
Cold or cleansing	36.0	18.0	34.0	36.0	44.0	37.0
Foundation	17.4	6.0	14.0	22.0	22.0	16.0
Medicating	12.5	28.5	17.0	11.0	7.0	6.0
Night	10.0	4.0	8.0	14.0	18.0	12.0
Cleansing lotion	9.0	5.0	8.4	11.0	12.0	6.0
Lubricating	8.0	2.0	6.0	9.0	14.0	8.0

TABLE 2

Percentage of Occasional Use by Social Classes

	Upper Class	Middle Class	Lower Class
Cold or cleansing	53.0	56.0	38.0
Foundation cream or lotion	30.0	24.0	12.0
Medicating cream or lotion	18.0	22.0	11.0
Night cream	18.6	15.4	9.5
Cleansing lotion	14.0	12.0	9.0
Lubricating cream	14.0	11.0	8.0

TABLE 3

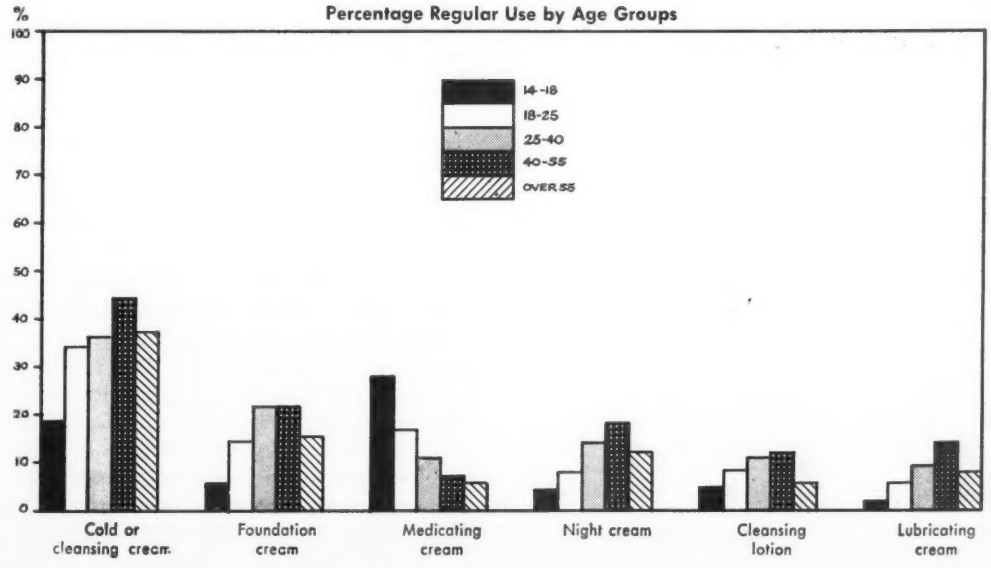
Percentage of Use by Population in Towns and Cities

	More than 1,000,000		50,000 to 1,000,000		2,500 to 50,000		Less than 2,500	
	Occasional	Regular	Occasional	Regular	Occasional	Regular	Occasional	Regular
Cold and Cleansing cream	48.0	29.0	41.0	30.0	56.0	38.0	60.0	41.0
Foundation cream	20.0	12.0	15.0	13.0	28.0	26.0	30.0	17.0
Medication cream	16.0	9.0	21.0	14.0	22.0	19.0	27.5	12.0
Night cream	14.0	9.0	9.0	4.0	16.0	11.5	26.0	15.0
Cleansing lotion	12.0	9.0	8.0	4.0	16.5	12.0	14.0	8.0
Lubricating cream	10.0	8.0	15.0	10.0	10.0	7.0	12.0	8.0

TABLE 4

Percentage of Use of Skin Care Products by Geographic Area

	Cold and Cleansing Cream		Cleansing Lotion		Foundation Cream		Medicated Cream		Night Cream		Lubricating Cream	
	Occasional	Regular	Occasional	Regular	Occasional	Regular	Occasional	Regular	Occasional	Regular	Occasional	Regular
New England	59.4	34.0	14.0	7.8	25.0	19.0	21.0	14.0	9.0	5.5	9.0	6.0
Middle Atlantic	44.0	26.0	11.5	6.5	18.5	12.0	17.5	9.0	10.5	7.0	11.0	6.5
S. Atlantic	48.4	28.0	9.5	7.0	21.0	12.0	18.0	8.5	16.0	12.5	13.0	8.5
E. N. Central	52.0	37.0	12.0	7.0	26.0	19.0	18.0	11.0	16.0	8.5	11.5	7.0
W. N. Central	58.0	32.0	19.0	9.5	38.5	22.0	23.5	11.0	18.5	7.0	18.5	7.5
E. S. Central	52.0	36.0	9.0	6.0	37.0	23.0	16.0	8.0	23.0	15.0	6.0	5.0
W. S. Central	58.5	37.0	13.0	10.5	22.0	14.0	20.0	9.5	14.5	8.5	11.0	6.0
Mountain	66.0	45.0	21.5	9.0	28.0	19.0	32.5	11.5	37.0	16.0	22.0	14.0
Pacific	50.5	37.0	15.5	12.0	21.5	16.0	16.5	12.0	17.0	10.5	12.0	8.0
Average	52.0	34.0	14.5	8.5	26.0	17.0	20.5	11.0	16.0	10.0	12.5	7.5



Percentage Regular Use by Age Groups

EVALUATING AEROSOL SHAVE CREAMS

BY PHYLLIS CARTER AND H. M, TRUAX
ATLAS POWDER COMPANY

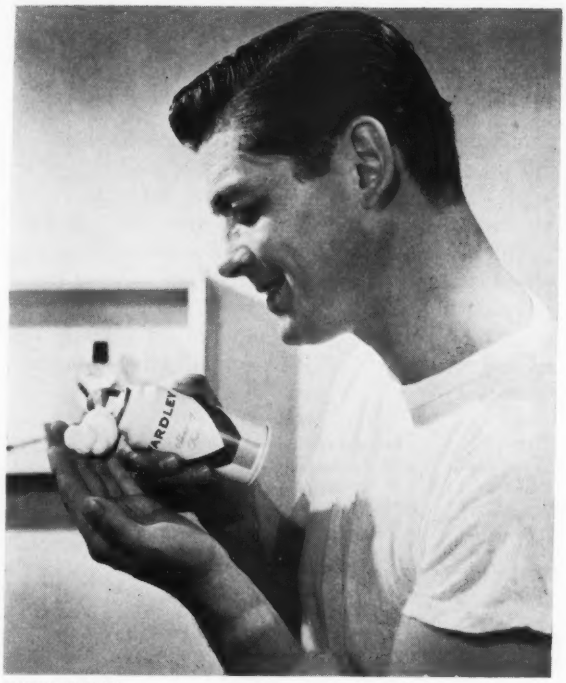
This statistical study of pressurized shave cream formulations indicates factors leading to effective products. Further calculations can be found in the Proceedings of the Scientific Section of the Toilet Goods Association, No. 35, from which this article is abstracted.

Despite their popularity, there has been little published work on aerosol shaving creams describing the effects of ingredient choice on product properties. The purpose of this study was to screen a number of formulation factors to determine their relative effect on concentrate properties and on foam and dispensation properties of the pressurized product.

Alternate search showed that the base of most formulas is approximately 5 to 11 per cent stearic-lauric or stearic-coconut oil fatty acid soap, usually from triethanolamine. The blended soaps contain at least 65 per cent of the stearic soap. Polyols, glycerin, 70 per cent sorbitol solution, or propylene glycol, are used in most of them at the 1 to 10 per cent level. The propellant level usually used is 5 to 10 per cent. Many ingredients such as mineral oil, petrolatum, cetyl alcohol, and surfactants are added for special effects. This literature review pointed up the fact that the patent of Spitzer, Reich, and Fine[14] covers many typical products. If the formulating ideas included in the present study are considered for adoption, patent position under this or other existing patents should be determined.

The next step was a survey of several shaving cream manufacturers as well as a container and propellant supplier to obtain additional formulation data on which to base the proposed study. From the data obtained it was concluded that the usual soap concentration is 7 to 12 per cent, the usual fatty acid is blended stearic acid-coconut oil fatty acid at approximately an 80/20 ratio, and the free fatty acid range is about 1 to 3 per cent. Polyols are usually used at a 2 to 10 per cent level. In addition, fluorinated hydrocarbons (usually dichlorodifluoromethane dichlorotetrafluoroethane 40/60 or 57/43, weight per cent blends) are most frequently used as the propellant; their use level is 6 to 10 per cent. Recently liquified petroleum gases (hydrocarbons) have been adopted as aerosol shaving cream propellants. One manufacturer indicated that the usual propellant used is an 87 per cent isobutane, 13 per cent propane blend (mol per cent), used at approximately 3 to 7 per cent. A propellant supplier indicated that an 80/20 (mol per cent) ratio is commonly used. A publication[16] by a liquefied petroleum gas supplier indicated that these propellants are used on the same weight basis as fluorinated hydrocarbons. A more recent publication[17] indicates that substitution of hydrocarbons for fluorinated hydrocarbons should be made on a volume basis.

Based on the literature and customer surveys, a number of variables appeared to be important in aerosol shaving cream formulation. They are: soap concentration, fatty acid type, free fatty acid concentration, polyol type, polyol concentration, propellant type, propellant concentration, additive type, and additive concentration. Of these, study of soap type, additive type, and additive concentration would have increased the amount of work extensively. Therefore, it was decided to limit the work by eliminating these



COURTESY YARDLEY

three variables and studying the remaining seven, using triethanolamine soaps—which proved to be the most widely used soap type in both surveys.

Neither survey yielded much information about methods of evaluation of aerosol shaving creams. One publication[18] describes foam volume generated by a given amount of concentrate, the percentage discharged from the can, foam strength, foam stability, and wettability as important properties for aerosol foams. One shaving cream manufacturer considered bubble size an important criterion. Shaving properties such as blade lubrication, spreading on the face, beard softening and rinsability were also mentioned [11, 12] as important. Evaluation of the effect of the shaving cream concentrate on the aerosol can has also been rated important.[5, 7, 8, 11]

In considering the properties that should be evaluated in this study, it was apparent that a study of shaving properties and can corrosion, although quite important, were beyond the scope of available personnel and equipment. For evaluation of the shaving cream concentrate, viscosity, pH, density, and stability were chosen. For evaluation of the foam and dispensation properties of the pressure packaged concentrate, shaves per can, residue in the can after discharge, foam density, foam strength, drying time and bubble size were selected.

Experimental Planning

The large number of variables indicated that many experimental runs might be required. The advantages of changing all factors simultaneously according to a definite plan can be summarized as follows:

1. It is possible to determine differences in end result that are smaller than would be detected if only one factor were varied at a time.
2. This approach allows study of many variables with a minimum number of experiment runs.
3. The use of this approach allows an estimate of the inbred experimental error in the procedure.

As many variables as possible should be examined, keeping the number of levels of each variable as small as possible. In this way, the maximum amount of screening information is obtained for minimum number of runs.

The purpose of the particular program on shaving cream was to screen a number of factors and determine their relative effect on a series of concentrate, dispensation, and foam properties. The statistical design selected is termed a "two level factorial" in which each of the variables is evaluated at two levels —a high and a low level.[19]

A list of the variables is shown in TABLE 1. Each has been coded by the addition of a letter A through G with two alternate variables coded as Y and Z. TABLE 2 shows a listing of the experimental conditions used in this experiment. On the left side of this table are listed combinations of letters, which spell out the treatment conditions that should be used for each of the eight runs. There are just two levels for each of the seven different variables. Therefore, in a shorthand notation, the treatment conditions may be represented in the first column by the presence or absence of a particular letter. For instance, if the second experimental run is considered, it can be seen that the letters a, d, f, and g are present. This shows that this particular experimental run should include variables A, D, F, and G at the higher level while the remaining variables should be held at the low levels.

TABLE 1
Variables and Their Use Levels

Designation	Variable	Use Level Low (—)	Use Level High (+)
A	Soap concentration	8%	12%
B	Fatty acid ratio Triple pressed stearic acid/ coconut oil fatty acid	70/30	90/10
C	Free fatty acid concentration	1%	4%
D	Polyol type 70% Sorbital solution—S Glycerin—G	S	G
E	Polyol concentration	2%	10%
F	Fluorinated hydrocarbon type Dichlorodifluoromethane dichlorotetrafluoroethane blends	40/60	57/43
G	Fluorinated hydrocarbon concentration	5%	9%
Y	Propellant type Liquefied petroleum gas (isobutane-propane blend) Fluorinated hydrocarbon (dichlorodifluoromethane dichlorotetrafluoroethane blend)	LPG	57/43
Z	Propellant concentration	5%	9%

The right-hand portion of TABLE 2 shows how to use the shorthand notation to construct a table listing the exact experimental conditions for each of the seven variables. In the previous example, variables A, D, F, and G were at the high level. This is now indicated by the plus sign below those variables. The presence of minus signs signifies low level conditions. The selection of these eight experimental treatment conditions from the possible total of 128 such runs is based on statistical theory. They are selected so that one may estimate the relative effect of each of the seven variables independent of one another.

An important characteristic of this set of eight runs is that each of the variables is evaluated four times at the high level and four times at the low level. This shows that a certain degree of balance has been built into the experiment, through which it is possible to compare four high results with four low results for each of the seven variables in only eight runs. If the old one-factor-at-a-time approach had been considered, it would be impossible to obtain the type of precision that is received in so few runs.

TABLE 2
Experimental Conditions (Abstract)

Treatment Combinations (Run Conditions)	Variables A	B	C	D	E	F	G
(1)	−	−	−	−	−	−	−
adfg	+	−	−	+	−	+	+
bdeg	−	+	−	+	+	−	+
abef	+	+	−	−	+	+	−
cdef	−	−	+	+	+	+	−
aceg	+	−	+	−	+	−	+
bcfg	−	+	+	−	−	+	+
abcd	+	+	+	+	−	−	−

−low level
+high level

TABLE 3 shows the construction of the final experimental conditions for this design plan. The strategy of the experiment is the preparation of these eight experimental runs such that they then may be evaluated for as many different final property characteristics as is desired.

TABLE 3
Actual Experimental Conditions
Comparison of Fluorinated Hydrocarbons

Treatment Combinations (Run Conditions)	Run No.	Variables A	B	C	D	E	F	G
(1)	1	8	70/30	1	S	2	40/60	5
adfg	2	12	70/30	1	G	2	57/43	9
bdeg	3	8	90/10	1	G	10	40/60	9
abef	4	12	90/10	1	S	10	57/43	5
cdef	5	8	70/30	4	G	10	57/43	5
aceg	6	12	70/30	4	S	10	40/60	9
bcfg	7	8	90/10	4	S	2	57/43	9
abcd	8	12	90/10	4	G	2	40/60	5

Key: See Table 1.

For comparison with the basic design, in which fluorinated hydrocarbons were used, four of the formulations were pressurized with liquefied petroleum gas. The purpose of this additional study was to obtain information regarding the relative effect of two different propellant types. TABLE 4 shows the experimental conditions for this portion of the work.

Concentrate Preparation and Evaluation Methods

TABLE 5 shows the charge weights used in preparing the shaving cream concentrates and in pressurizing them, as well as data on the raw materials used.

Thirteen thousand gram batches of each shaving cream concentrate were prepared in a jacketed three-gallon Gifford-Wood Agi-Mixer. The stearic and coconut oil fatty acids were placed in the reaction vessel and heated to 95° C. by circulating steam through

TABLE 4
Actual Experimental Conditions
Comparison of Fluorinated Hydrocarbons with Liquefied Petroleum Gas

Treatment Combinations (Run Conditions)	Run No.	Variables A	B	C	D	E	Y	Z
(1)	1a	8	70/30	1	S	2	LPG	5
adyz	2	12	70/30	1	G	2	57/43	9
bdez	3a	8	90/10	1	G	10	LPG	9
abey	4	8	70/30	4	G	10	57/43	5
cdey	5	12	90/10	1	S	10	57/43	5
acez	6a	12	70/30	4	S	10	LPG	9
bcyz	7	8	90/10	4	S	2	57/43	9
abcd	8a	12	90/10	4	G	2	LPG	5

Key: See Table 1.

the jacket. The countercurrent paddles, at 50 rpm and the homogenizer, at a medium speed, were then put into operation. Agitation was continued throughout the preparation. The water was heated to 98 to 100° C. and the triethanolamine and polyol were then added to it. The water phase was added slowly through a jacketed 3000 ml. separatory funnel at approximately 600 ml. per minute. Steam heating was continued during the alkali addition, approximately 20 minutes, and for 10 minutes following addition. After this period, cold water was circulated through the jacket. When the batch reached 30° C., it was removed from the Agi-Mixer. Runs 6 and 8 were not homogeneous, and were agitated for five minutes with the homogenizer at high speed before removal. Part of each batch was reserved for testing and the remainder was pressure packaged.

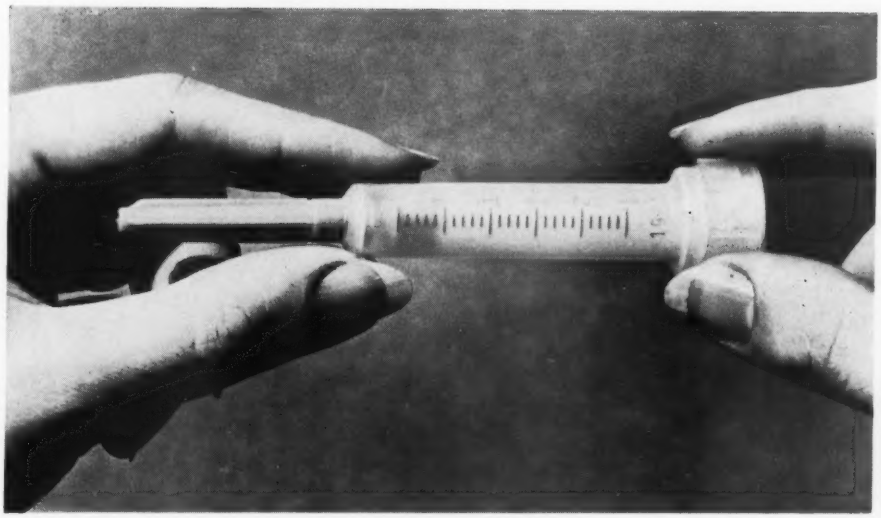
The following test methods were used in studying the properties of the shaving cream concentrates:

Viscosity. Three 16-ounce bottles were filled with the sample of shaving cream concentrate immediately after preparation. The viscosity of the product was determined using a Brookfield Model HAT viscometer. Samples were observed after a storage period of one week and two months at room temperature.

Hydrogen-ion Concentration. Approximately 75 ml. of the shaving cream concentrate was placed in

(*Continued on page 368*)

Packaging and Selling



A disposable syringe with polypropylene parts eliminates the processing of hypodermic syringes for re-use. The Monoject syringe, which is manufactured by Roehr Products Company, Inc., of Florida, competes favorably in cost with re-usable units, when the expense of collecting, cleaning, sharpening, sterilizing and re-distributing the latter are taken into account.

Moreover, the danger of cross-infection is minimized by single usage of the 2½ cc. unit.

Escon polypropylene supplied by the Enjay Chemical Company, a division of Humble Oil & Refining Company, is used in the critical parts of the disposable unit. These include the syringe barrel, and the protective sleeve and cap in which it is packaged. Escon is said to be compatible with all established current types of drugs.

The syringe is removed from its polypropylene case by twisting the cap to break the heat seal. A light tap loosens the unit from the protective sleeve. Then, a twist of the needle sheath exposes the needle, and the syringe is ready for filling. The needle may be reinserted in its sheath if a delay occurs between filling and use.

Ucon®
propellants

UNION CARBIDE

UNION CARBIDE CHEMICALS COMPANY
Division of Union Carbide Corporation
270 Park Avenue, New York 17, New York

That Sweet Smell of Success

BY DONALD S. TUTTLE, JR.
VICE-PRESIDENT, AEROSOL AND COSMETIC DIVISIONS
THE RISDON MANUFACTURING CO.

Decorative, refillable aerosol containers, like the one above by Risdon, with a metered valve, are small enough to be carried conveniently in the purse, thus helping to increase the popularity of aerosol perfumes.

The aerosol has brought colognes up in the world. A similar success with perfumes seems very likely.

Are aerosol perfumes about to give off the same "sweet smell of success" that spray colognes have emitted for the last five or six years?

In other words, is the perfume market ready for an aerosol breakthrough?

An analysis of market surveys for the last several years indicates evidence of a bright future for aerosol packaging of perfumes.

According to this year-by-year review, the dollar sales of all fragrances, regardless of packaging, increased 56 per cent between 1955 and 1960. Largely responsible for this sizable increase were aerosol colognes whose sales volume, measured in dollars, soared 205 per cent. Nonaerosol colognes registered a gain of only 11 per cent. Perfumes of all types registered a 32.5 per cent increase. Because there was no breakdown for the perfume figures by types of packaging, there is no way of determining precisely what part of that increase may be attributable to aerosols.

However, a number of factors point to increasing aerosol perfume sales.

First, more aerosol perfume packages are on the market now than ever before. It is estimated that, in 1960, more than twice as many fragrance houses were marketing spray perfumes as in 1958. This means greater retail distribution, more shelf and counter exposure, more advertising and more retail personnel suggesting aerosol perfumes to customers. Only three major fragrance houses have held out entirely against the aerosol fragrance trend.

Second, the great success of aerosol colognes has introduced many women to the world of fragrances. To many of these new fragrance users, the aerosol form of application is the accepted and preferred method.

The growing popularity of aerosol colognes, spectacular though it is when measured over a six-year span, also has shown a steady year-to-year climb of about $7,000,000.

Rather than taking sales away from conventionally packaged colognes, I believe that aerosols have created a totally new group of customers. I base this conclusion on these sales figures: In the period from 1951 to 1955 before sales of aerosol colognes were totaled separately, sales of all colognes increased approximately 4 per cent each year. In 1955, cologne sales were tabulated for the first time by types of packaging. Nonaerosol-packaged colognes showed a drop of about 7 per cent in the next year, while aerosol packaged colognes jumped more than 41 per cent during the same period.

From 1956 to 1957, the sales of nonaerosol colognes increased by the usual 4 per cent while overall cologne sales jumped almost 12 per cent. Aerosol cologne sales advanced by 24 per cent. In 1958, 1959 and 1960, the yearly increase for nonaerosol colognes averaged more than 6 per cent. The average gain for aerosol colognes was 22 per cent in 1958 and 1959. Sales volume in 1960 increased by more than 7 million units, up 15 per cent from the 1959 total.

Women who have never before used a fragrance are trying aerosol fragrances, because they are easy to apply, last longer, retain their freshness and original odor and are leakproof and spillproof.

Having developed the fragrance habit through the use of a comparatively inexpensive aerosol cologne, many of these women are starting to sample perfumes. When they do this it's realistic to assume that

(*Continued on page 410*)

A BASIC CONCEPT WITH THE FLEXIBILITY OF YOUR IMAGINATION

You specify the bottle shape and size—Newman-Green can provide the quality aerosol valve with the built-in adaptability to meet your specific needs. The basic design of the Newman-Green valve and its exclusive features always stay the same. Yet the concept is as flexible as your particular needs may be. Companies all over the world are using this built-in adaptability for a wide variety of products and propellent systems. When you specify Newman-Green bottle valves, you are buying the protection and economy of quality. And our experienced staff is ready to serve you now with the most prompt service possible consistent with the high quality standards aerosol customers have come to expect from Newman-Green.

WESTERN DISTRICT
1144 East Meda Avenue
Glendora, California
MAdison 6-9980

EASTERN DISTRICT
415 Lexington Avenue
New York 17, New York
MUrray Hill 7-7147

MAIN OFFICE & PLANT
57 Interstate Road
Addison, Illinois
KIngswood 3-6500

NEWMAN-GREEN *Creative Aerosol Valve Engineering*

Container Corp. designers studying the attention-getting quality of a package in a visibility tester, one of many visual devices used by the company. Impact of the design on peripheral or side vision is measured.

Market Research
COMPANY DEPARTMENT

The Container Corporation of America establishes a separate department for market research.

The Container Corporation of America, having decided that it needed the results of market research, found it worthwhile to establish a Consumer Research Field Office of their own, rather than to depend on outside organizations. Located in the Chicago suburb of Park Forest, the research center is under the direction of the research department of the company's Design Laboratory. The center's staff conducts intensive interviews with consumers to learn conscious and subconscious preferences in elements of package design and advertising materials. Panels are selected from 11,000 respondents drawn from the "middle majority" of the population, plus representations of upper and lower income groups. Methods of using the panel include structural interviews via questionnaires, psychological techniques, statistical studies, perceptual tests and narrative depth interviews. Additional panels are planned for the New York-Philadelphia area.

Among the technical instruments most commonly used at the research center as aids in pre-testing a package's visual impact is the Ocular Camera that deals primarily with the question of attention. It takes a continuous series of pictures of the observer's eye moving over a design. This device also photographs the patterns of the eye when eye patterns are recorded in photostatic form. Charts may be studied for indications of relative impact effectiveness, sustained attention and layout considerations.

Another visual testing device is the Vision Impact Tester, the tachistoscope, which flashes illustrations of packages on a screen at increasingly longer intervals of time, to determine which design elements are more rapidly recognized. This indicates, for instance how long it takes the average person to identify the names and contents printed on a carton.

The center also uses a Visibility Meter which measures the difference between the legibility or clarity of two package designs when viewed under identical lighting conditions, and a Visibility Tester to measure peripheral vision. The latter blurs, sharpens, dims, and brightens packages at the will of the "button-presser" conducting the test.

Finally, the Angle Meter records the ability of designs to project identification from acute angles of approach. This instrument simulates supermarket conditions where the shopper approaches packages from aisle and thus from an angle.

Perceptual tests conducted with these instruments

(*Continued on page 311*)

DAVIS ACETATE
makes beauty products more beautiful!

Label and applicator on this Frosté nail enamel bottle sparkle like polished gold in a glistening, crystal-clear blister of Davis Acetate. The true, iridescent shade of the enamel comes through, too, bidding brightly for attention, and making customer selection easy.

The package was assembled by AR. WINARICK'S facilities with a blister produced by PLASTIC ARTISANS, Port Chester, N. Y., who chose Davis Acetate for its exceptional clearness, its outstanding durability and protective qualities.

Davis extruded acetate sheets, rolls and film come in all gauges—transparent, translucent or opaque—and are ideal for all kinds of vacuum forming applications.

We have been supplying the packaging industry with plastic materials for over 40 years, and we welcome the opportunity to help packagers with their problems. Let us send you a brochure on our facilities and the wide range of plastics we produce, together with their properties and applications.

PRODUCT BY AR. WINARICK, INC. • BLISTER BY PLASTIC ARTISANS • EXTRUDED ACETATE BY JOSEPH DAVIS PLASTICS CO.

JODA

Joseph Davis
PLASTICS COMPANY
430 Schuyler Avenue, Kearny, N. J.
Phone: WYman 1-0980 New York: BArclay 7-6421

Exhibited at the Printing and Packaging Museum are Dr. J. H. McLean's Blood Purifier, Tricky Sheep, a game used by a Jonesville, Michigan, drug company as an advertising premium, and Paul's Pimple Pills. Interior package of pills is a wooden vial with a wooden stopper.

describe the visual clarity and general viewing requirements of package design.

Although such special instruments help diagnose a problem, it is the designer who must develop the solution.

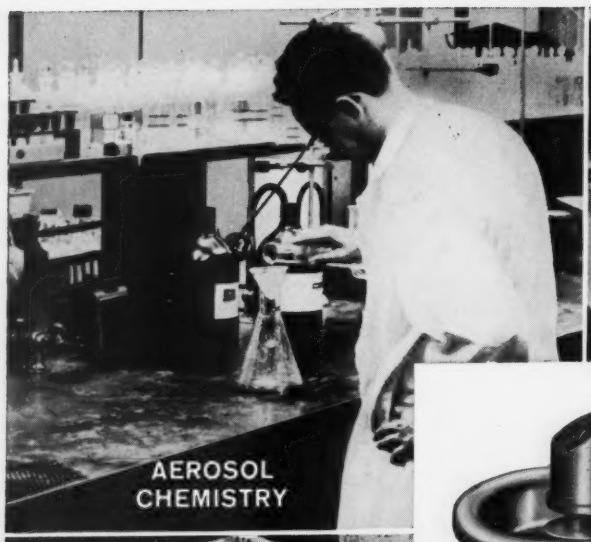
Albert Kner, director of the Design Laboratory, became a pioneer package designer in the container industry when he joined The Container Corporation in 1940, after coming to the United States from Budapest, Hungary, where he had been director of a printing firm. He developed the Design Laboratory from a one-man operation to one that now has 100 employees and 16 offices in the U. S. A., Germany and South America.

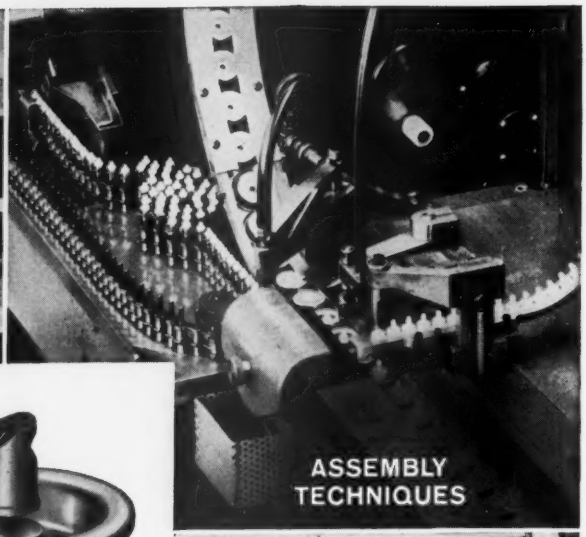
Mr. Kner feels that the marketing effectiveness of any product's package should be re-examined every year or so. Packages should be studied to determine whether they still appeal psychologically to customers in the specific markets for which they are intended. However, Mr. Kner warns that a package can be changed too often, making it impossible for the consumer to remember its identity.

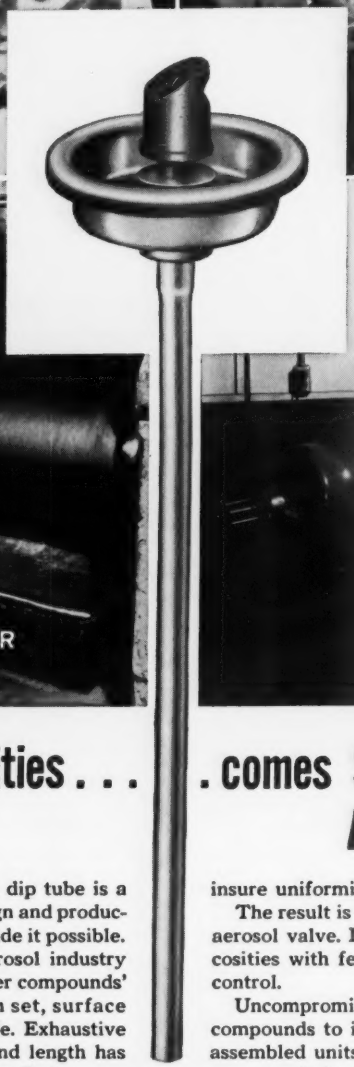
Because a cultural boom has begun to influence the design of household products and their packages in this country, the problem of winning customer acceptance is spreading from supermarket shelves into homes. Housewives, being more sophisticated than they used to be, will reject a gaudy package that does not fit into their decorating scheme. The trend is consequently toward packaging with the dual function of selling at the point of purchase and satisfying the visual requirements of women buying with their home environments in mind. Accordingly, cosmetics are now being packaged with soft, appealing colors that harmonize with bathroom decor. The container industry must now provide packages that can carry out a feeling of prestige and quality with-

(*Continued on page 401*)

The Printing and Packaging Museum, maintained to serve package designers, contains approximately 2,000 packages from the era of the frontier store through today. The gentleman is Albert Kner, director of the Design Lab.







From Unmatched Facilities . . . . comes Schrader's Superior Aerosol Valve

Every part of this aerosol valve except the dip tube is a Schrader product...and only Schrader's design and production facilities, greatest in the aerosol field, made it possible.

For example: techniques new to the aerosol industry were developed by Schrader to control rubber compounds' hardness, high resistance to compression set, surface smoothness, size uniformity, and service life. Exhaustive research into wire sizes, diameters, pitch and length has provided a superior valve spring with controlled tension. Rigorous new tests and special equipment were devised to control quality of each component. New production methods were used to insure uniformity and precision.

The result is the world's closest approach to a universal aerosol valve. It can handle a wide range of product viscosities with feather-touch actuation and true-aim spray control.

Uncompromising quality, extending from formulation of compounds to inspection and testing of components and assembled units is typical of Schrader. This valve is the culmination of 117 years of experience in meeting and solving pressurized air problems. Discuss your aerosol valve needs with Schrader's Aerosol Engineers.

Aerosol Valves

Schrader®
a division of SCOVILL

A. SCHRADER'S SON *Division of Scovill Manufacturing Co., Inc.*
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

Packaging and Selling

It was inevitable that the lines would form, the bugle would be blown and the warriors in the two camps would charge to battle some day. This whole business as to who owns the vitamin market, and just how good the vitamin market is, was bound to cause a rumpus.

Now we hear the battle lines really are forming, although the bugle has not quite yet been blown.

In the one corner, gentlemen, the National Vitamin Foundation with its newly appointed representative, a prominent public relations concern which has been given $100,000 to develop an educational program aimed at proving the value of supplemental vitamins.

The Vitamin Foundation includes such aristocratic names as Hoffmann-La Roche, Inc., Chas. Pfizer & Co., Inc., Merck & Co., E. R. Squibb & Sons and others.

In the other corner is the Nutrition Foundation, an organization whose members include most of the huge food companies. This organizaton is also starting an educational program, has hired a director of publicity, and will sponsor research in the field of nutrition, directed, of course, to show that all the necessary vitamins are abundant in a well-balanced American diet.

Of course, the food industry have been more or less going overboard in adding vitamin supplements, particularly in the basic foods of bread and milk. This would hardly prove the contention that a balanced diet will take care of public needs.

The real truth seems to be that a direct and vigorous battle is under way as to who gets the vitamin business. By that we mean vitamin supplements and vitamins in addition to those found naturally in food. Will it be the drug industry or the food industry?

We are very happy to see the Vitamin Foundation establish this public relations program for education. There is a great deal of work to be done on the average doctor's in general practice, many of whom have an abysmal ignorance of this whole subject but who are prescribing or advising with the conviction of their own very limited experience. Certainly there is an enormous area to be explored here, particularly for older people, people in distressed areas, people in areas of nutritive deficiency and, perhaps most of all, that vast group of Americans, variously estimated to as much as 20 million or more, who are plunging into restricted, slimming diets, most of them in the blackest kind of ignorance about nutrition.

Probably the food industry has a bone to pick with the pharmaceutical industry. We have certainly given them enough to worry about. There is no question that the super calorie-conscious Americans got that way largely because of the work being done in health research, very much so as a direct result in research on heart diseases, hypertension and so forth.

Research along this same line has unquestionably given our basic dairy industry something to worry about in respect to cholesterol and the saturated animal fats.

Even our canning industry can begin to wonder about the salt content, which is a health problem with a considerable part of the population stimulated by research in our trade.

Whatever the food industry may do, a brief glance at food advertising in such magazines as *Good Housekeeping* and *The Ladies' Home Journal* will show that the enormous expenditures of the food industry to expand their market has hardly put the health problem in the forefront.

On the other hand, it is true that this industry, and all groups associated with it in research, has been specifically concerned with health.

Increased activity in proprietary cough syrups is apparently stimulated by the entrance of several new companies into this market. The new products stirring up all this competition seem to be using a nonnarcotic chemical that has been on the market for quite some time.

Among these new products are entries by Warner-Lambert and Chesebrough-Pond's. Still another is a new product of Johnson & Johnson which, a few years ago, tried to introduce a cough medicine for children. J&J is now in the market with a new product based on this chemical and having a broad family appeal.

Over the last decade so many things have been done to glamorize the appearance and the packaging of medicines, particularly ethical medicines, that many people in the trade have taken all of these changes for granted.

As a result, the drug industry has some of the most beautiful packaging and some of the most attractive products of any branch of the packaging industry.

Probably the widest and most effective use of color, after the makeup division of the cosmetic industry, has been in the pills and tablets and capsules of

ethical pharmaceuticals.

There has been a revolution also in a substantially wider flavor appeal.

At a recent conference of the American Academy of Pediatrics, an exhibit was set up by the Academy of Medicine of the Cleveland Poison Information Center.

The purpose of this exhibit was to show visiting doctors the danger to very small children from these fascinating and glamorous looking products.

The danger has been to children of from one to three years old but four- or five-year-olds are also a problem.

According to the report of this convention, 300,000 children are accidently poisoned each year and accidental poisoning kills more children than rheumatic fever, polio, whooping cough, diphtheria, strep throat and scarlet fever combined.

Are demonstrators coming into supermarkets? Apparently two cosmetic executives think there is a place for demonstrators here, according to their talks at the tenth annual meeting of the Toiletry Merchandisers Association. Robert P. Neuffer, general sales manager, Chesebrough-Pond's and Northam Warren, president. Northam Warren, each predicted that the supermarket beauty department would soon become a separate department with trained sales specialists in attendance.

According to a study cited in one of these speeches, a personal sales representative sold two to three months' sales of goods in two days. This survey indicated that the increased total sales of the health and beauty department could amount to 42 per cent for a 12-monh period with a demonstrator.

A new perfume company established three years ago in Hawaii has a representative here looking for a distributor. This company, Liana of Waikekee, has had a successful introduction in the stores of our new state. Their products are called South Sea Perfumes and just to show that they have not failed to take advantage of the romance of the language of these islands, here is a list of their perfumes.

Awapuki—Tropical White Gruger
Pikake—Hawaiian Jasmin
Plumeria—Hawaiian Frangepani
Tiare—Tahitian Gardenia

The 5th annual survey of spot television issued recently by the Television Bureau of Advertising reports that cosmetics and toiletries are the second biggest spenders in spot television, after food and grocery products, and have increased their expenditures from 8.6 per cent of the total in 1956 to 9.2 per cent in 1960, with an increase of 10.7 per cent during the summer of 1960.

Drug products ranked fourth, following ale, beer and wine, with 8.1 per cent in 1956, 7.6 per cent in 1960 and 5.5 per cent during that summer.

In 1956, 288 brands of cosmetics were on spot TV; during 1960, 307 were shown.

Two hundred and eight drug brands were shown in 1956, 220 in 1960.

This industry and its branches far exceeds any other in the number of brands represented on spot TV.

During the last five years, cosmetics and toiletries manufacturers have increased their expenditures in spot TV by 50 per cent or more, manufacturers of drug products by 25 to 50 per cent.

Here are the expenditures of some of the top 100 national and regional spot television advertisers.

Bristol-Myers Co.	$10,169,560
American Home Products Corp.	9,412,110
Miles Laboratories, Inc.	8,132,990
Warner-Lambert Pharm. Co.	6,302,760
Avon Products, Inc.	4,000,240
Norwich Pharmacal Co.	2,619,030
Revlon, Inc.	2,359,060
Sterling Drug, Inc.	2,185,890
Maybelline Co.	2,115,950
Mennen Co.	2,069,180
Max Factor & Co.	1,952,450
Carter Products, Inc.	1,938,580
Drug Research Corp.	1,678,690
Pharma-Craft Co.	1,597,570
Lanolin Plus, Inc.	1,524,800
Plough, Inc.	1,516,010
Helena Rubinstein, Inc.	1,475,610
Chesebrough-Pond's, Inc.	1,446,150
B. C. Remedy Co.	1,387,480
Ex-Lax, Inc.	1,342,060

The following companies spent $20,000 or more, but less than the $1,300,000 of the 100 top companies.

Abbott Laboratories
Alberto-Culver Co.
Associates Finance Co.
Beaute' Vues Corp.
Beautyrama Enterprises
Beecham Products
Hazel Bishop, Inc.
Block Drug Co., Inc.
Bourjois, Inc.
Chanel, Inc.
Chattanooga Medicine Co.
Chemway Corp.
Colonia, Inc.
Coty, Inc.
Creomulsion Co.
Helene Curtis Industries, Inc.
Dan-D Industries
Father John's Medicine Co., Inc.
Germaine Monteil Cosmetiques Corp.
Johnson & Johnson
Kay Preparations Co., Inc.
Lamour Hair Products, Inc.
Lanvin Parfums, Inc.
Lehn & Fink Products Corp.
McKesson & Robbins, Inc.
Mentholatum Co.
Merck & Co., Inc.
Midland Pharmacal Corp.
Northam Warren Corp.
Northwestern Drug Co.
Noxsema Chemical Co.
OJ's Beauty Lotion Co., Inc.
Oviltone, Inc.
Parfum Corday, Inc.
Chas. Pfizer Co., Inc.
Richardson-Merrell, Inc.
Shulton, Inc.
Tan-O-Rama, Inc.
Vitamin Industries
J. B. Williams Co., Inc.
W. F. Young, Inc.

NEWS IN PACKAGING...

1. Ayerst Laboratories, Inc., division of American Home Products Corp., has introduced a spray formulation of Enzactin for athlete's foot in a 3-ounce aerosol container by Peerless Tube Company. The extruded aluminum container has a scratch-brush finish and paper labeling. Filler is George Barr & Co., white plastic overcap by Gilbert Plastics, and valve by Precision Valve.

2. Onox, a skin-toughening solution for treatment and prevention of athlete's foot, is now available in 6-ounce spray, squeeze bottles refillable from gallon containers at bulk prices, for industry's use.

3. Shulton has packaged its Desert Flower Talcum Powder in a 6-ounce pink, molded plastic flask.

4. New 55-gallon polyethylene and steel drum combines corrosion resistance with strength, for shipping products that require an inert lining surface with a strong outside covering. The nonbreakable polyethylene liner, which is removable for cleaning, can be used separately. The drum is closed with a tightly fitting polyethylene cover and sealed with a bolted steel closure ring. Manufacturer is **Redmanson Corp.**

5. Christian Dior's Eau de Cologne Fraiche in spray form comes in a good-looking, 3-ounce, gray, fluted cylinder with plasticized finish, golden cap and base.

6. Shalimar, L'Heure Bleue, Vol de Nuit and Mitsouko, four **Guerlain** fragrances, are in new ½-ounce frosted crystal bottles. The familiar outer boxes are retained.

7. An apothecary bottle holds the men's fragrance in this counter display of a new line of men's toiletries by **Don Loper.**

8. An oval, 2-ounce bottle with silver foil labeling holds **Ar-Ex Products'** Foundation Lotion Liquid Makeup.

9. Coty is offering four of its fragrances—L'Aimant, Emeraude, L'Origan and Paris—in a new measured mist 2½-ounce cylinder, with a counter display in either black, gold and silver, or gold and silver.

10. Winarick's Dura-Gloss Froste Nail Enamel in a colorful acetate blister package is designed to stand upright on a counter or a stand, or to hang for pegboard display. Formed from acetate supplied by the Joseph Davis Plastics Co by Plastic Artisans.

C.S.M.A. Meeting

The Tenth Annual Aerosol Package Contest will be held in conjunction with the annual meeting of the Chemical Specialties Manufacturers Association in the Roosevelt Hotel, New York City, Dec. 4-6, 1961. Shave products; hair preparations; perfumes, colognes and toilet waters; and other personal products will be judged as separate groups. For information: C.S.M.A., 50 East 41st St., New York 17, N. Y.

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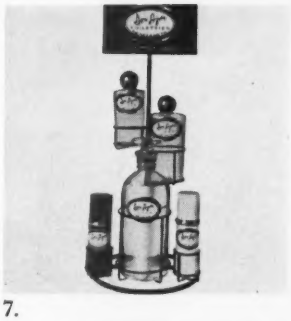
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NEWS and VIEWS

BY TED KLEIN PUBLIC RELATIONS DIRECTOR*

Industrial Psychologists

A recent issue of *The New York Times Magazine* carried an article comparing the reception of Freud and his theories by people of this country with that of Europeans. Europeans generally feel that psychiatry or psychoanalysis is a strictly personal matter. On the other hand, in the United States where Freud's influence is widespread, the subject is openly and often proudly discussed by the person undergoing therapy.

Motivational research, subliminal advertising, image research are all used by large advertising agencies with the assistance of the psychologist and psychiatrist. But psychology has not had the same success in advertising that it has shown in the increasingly important field of industrial psychology.

Tests and Industrial Psychology. The intelligence tests used today in schools and in industry originated with French psychologists and were modified by Americans, among them Terman, Otis, and Wechsler. These are, basically, devices for measuring an individual's accomplishments in comparison with those of other individuals. A test cannot measure directly the intelligence of a given individual or his capacity and accomplishment prospects, but it can indicate how individuals of a particular age group compare with one another. Tests can also determine an individual's motivations and desires.

Many companies, both large and small, use the services of a psychologist to test prospective employees. These written and/or oral examinations may take up to three days and can cost the employer several hundred dollars. From my training as a clinical psychologist I can say that it is impossible to determine whether a prospective employee will be a good chemist or if he will be able to work well with the present management. The tests can only indicate how much knowledge of basic chemistry has been retained and whether the applicant has successfully mastered the tools of chemistry.

Salesmen can be tested and the nature of their personalities determined—whether they are outgoing and genuinely like people, and if they can take the frustration of being refused an order. But no test can determine a person's ability to sell a given product to a given customer, nor whether he will be able to work with a particular sales manager.

This brief and, I'm afraid, incomplete discussion of industrial psychology testing may serve to point up what I believe to be a major failing, namely, reliance on the test as the most important tool of industrial psychology.

A Problem of People. Several industrial psychologists' firms go beyond the use of tests in their work as management consultants. One—Rohrer, Hibler & Replogle—typifies what I think is an enlightened way of using psychology to serve management; they use tests only as a minor tool of personality evaluation.

Not long ago I talked with Dr. John McNutly, an industrial psychologist with Rohrer, which has more than 70 doctorates on its staff, about his firm's operations. "We deal in people," he told me. "As consultants to management, we know that top management alone has the responsibility for building, directing, and improving a business. Business is basically a problem of people."

Dr. McNutly outlined the kind of services his firm provides—on an annual basis after a complete study of the prospective client's firm has been made from the inside.

The firm acts, not as counselor to management, nor as employment agency, but in the capacity of an industrial psychologist. It will place in a firm employees who are both competent in their present responsibilities and likely to develop further ability. Rohrer organizes such individuals to carry on the many functions management expects of them, and also teaches employees, stimulates them to action, and provides effective leadership by getting top management to grow ahead of key employees.

How Industrial Psychologists Help. Suppose your firm has to select someone from within to take the company president's position when he retires. Or perhaps your firm is losing many of its best men to competition. Maybe your stockholders are pressuring you for greater dividends, claiming you need better management, and you want to increase production without buying new equipment or hiring more men. These are the kinds of problems to take to an industrial psychologist.

"Firms like ours are judged by our success in proportion to our failures," Dr. McNulty told me. "Our clients include very large manufacturing firms with thousands of employees as well as companies with only three or four executives and less than 50 employees. We first evaluate people as people. Then, on the basis of our knowledge of the company, we interpret these people as individuals to management. This means we can only deal with the very top executives in a client's organization."

One of the reasons for the inadequacy of much advertising is, I think, its failure to make clear to the prospect why he should buy. The same can be said of individuals who do not understand themselves or what their employers expect of them. Industrial psychology, properly applied by trained individuals, is one of the best tools now available to deal with such problems.

Clarence B. Randall, former board chairman of Inland Steel, had this to say, in the April 1961 issue of *Dun's Review*, on the use of industrial psychologists: "When such a program is undertaken (using the consultant services of psychologists on an annual basis) the company sets out, for the first time in its history, to take a human inventory. It makes an intelligent effort to bring together in one place an objective statement of its most significant assets and liabilities—the talents and the limitations of the individuals who constitute management. Panning for gold in a good stream could not be more rewarding."

*Paul Klemtner & Company, Inc.

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Metal Closures—screw and lug types

Molded Closures—stock and private design in a wide range of colors, featuring liner retaining ledge.

New Products

PHARMACEUTICALS

Monase (Upjohn) is indicated for psychiatric and medical conditions in which mental depression is prominent and for which mood elevation and psychomotor stimulation are considered beneficial. Each coated, compressed tablet contains 15 mg. of tryptamin acetate. Supplied in bottles of 100.

Atarax Parenteral Solution (Pfizer) in a new form of the 10 cc. vial with each cc. containing 50 mg. of hydroxyzine hydrochloride, is used to treat the acutely disturbed or hysterical patient seen as an outpatient or in the hospital, the acute or chronic alcoholic with anxiety withdrawal symptoms or delirium tremens, and patients requiring adjunctive medication before or after operations of childbirth.

Azalone, Vasocon and Vasocon-A (Smith, Miller) are now ophthalmic solutions. Azalone is an antihistamine for symptomatic relief in ocular disorders when caused by allergies; Vasocon, a vasoconstrictor and decongestant with prolonged action; and Vasocon-A, a combination of the two.

Phazyme with Phenobarbital (Reed & Carnrick) contains in the outer layer for release in the stomach, pepsin, N.F. 100 mg., diastase 25 mg., demethyl polysiloxane 20 mg. and phenobarbital 15 mg. (¼ gr.); and in the inner core for release in the duodenum, pancreatin, N.F. 240 mg. and dimethyl polysiloxane 40 mg. It is indicated for relief of discomfort due to gastrointestinal gas resulting from aerophagia, dyspepsia, faulty digestion and food intolerance, and emotional stress. The two-phase, yellow tablets are supplied in bottles of 50.

Alphosyl Lubricating Cream (Reed & Carnrick) is a new form of Alphosyl containing allantoin 2 per cent and special coal tar extract 5 per cent, formulated in a cream base combining saturated and unsaturated free fatty acids, naturally occurring triglycerides, sterols and esters resembling the lipoid constituents of normal healthy skin. The base provides lubrication and water retention. Indicated for topical therapy of psoriasis, especially in intertriginous areas where dry, scaly lesions cause constant friction and continuous irritation.

Torecan (Sandoz) is thiethylperazine maleate, a new phenothiazine compound possessing predominantly antiemetic properties It contains sodium metabisulfite 0.25 mg., sodium bicarbonate 1.0 mg., propylene glycol 50.0 mg., and water for injections It is supplied in yellow tablets of 10 mg. each, in bottles of 100; ampuls, 2cc., 10 mg., in boxes of 12 and 100.

Metha products (Borden) are three new formulations developed for the treatment of allergic and inflammatory skin ailments. Methatar creme is especially suited for exzematoid dermatitis, atopic and contact dermatitis, pyodermas, and infantile dermatitis. Methaphor ointment is recommended for the relief or irritation, pain, and itching of minor skin disorders, including chapping, prickly heat, detergent rash, insect bites, ivy poisoning, impetigo, bedsores, sunburn and other minor burns. Methaseptic powder, used as a wet dressing or soak, is designed for the treatment of acute dermatitis and eczema.

Capla Mebutamate (Wallace) is a new centrally acting agent for the treatment of hypertension, either alone in mild cases, or with diuretics or peripherally acting hypotensive agents in more severe cases. It is sold in bottles of 100 white, scored tablets, each containing 300 mg. of mebutamate.

Mylanta (Stuart) is for gastric distress due to hyperacidity and gas entrapment and comes in tablet and liquid form. It is supplied in boxes of 100 two-layer yellow and white, flavored, chewable tablets, and a 12-ounce bottles of white, pleasant tasting liquid suspension.

Tempotriad (Smith, Miller) a new psycho-kinetic activator, is designed to fill a therapeutic void in the treatment of chronic fatigue and emotional exhaustion, where these conditions have no pathological basis. Available in tablets or liquid.

Chel Iron-112 (Kinney) is a palatable, fruit-flavored, red syrup containing 417 mg. ferrocholinate equivalent to 50 mg. elemental iron, with 10 mg. thiamine HC1 (vitamin B_1) and 25 mcg. cobalamin concentrate (vitamin B_{12} activity) in each teaspoonful. It is recommended as an appetite stimulant and for the prevention or correction of iron deficiency anemia.

Alpha-Keri (Westwood), a water-dispersible bath oil readily absorbed by the skin is indicated for various skin disorders associated with dryness and itching. It contains Kerohydric, mineral oil, and a nonionic emulsifier.

Enzactin (Ayerst) is a spray formulation for athlete's foot and other superficial fungus infections in a 3-oz. aerosol container by Peerless Tube Company. Enzactin also comes as a powder and a cream.

COSMETICS

L'Oreal Super Blue is a creme oil lightener for very light blond shades, which offers extra fast action and effective use with hair that usually resists.

Lanolin Plus has five new shades of nail enamel in cream and pearlescent form: Acapulco Pink, Waikiki Pink, Portofino Pink, Malibu Pink, and Lavendar Pink.

Forty-Two Products Shampoo With Egg is being introduced on a "one free with 11" basis. It comes in a 16-oz. bottle.

Houbigant Eau de Cologne Tres Fine is a new cologne that is said to be more lasting. Available in an 8-oz. bottle.

Don Loper Men's Toiletries is a new line including a man's fragrance in a large apothecary bottle.

Max Factor Powder Eye Shadow is smearproof, nondrying, long-wearing and is applied with the fingertip. In six colors.

Max Factor Fresh Beauty Moisture Mask is a 10-minute treatment for cleansing and refreshing the face. The pink powder is to be mixed with equal amounts of water. •

Good things come in small aerosol packages

And our new, completely automatic, high-speed line, **just** for small aerosol packages, is the best way to put your good things in glass, plastic, aluminum or stainless steel containers.

COSMETICS AND PHARMACEUTICALS can be loaded (cold or pressure fill) at the rate of 80 units per minute.

Some of the good things we have put in small packages are: perfume, cologne, hair spray, skin lotion, topical steroid spray, topical anesthetic spray, metered nasal spray, metered antibiotic spray, metered vitamin syrup, poison ivy spray, quick-breaking foam, antiseptic powder.

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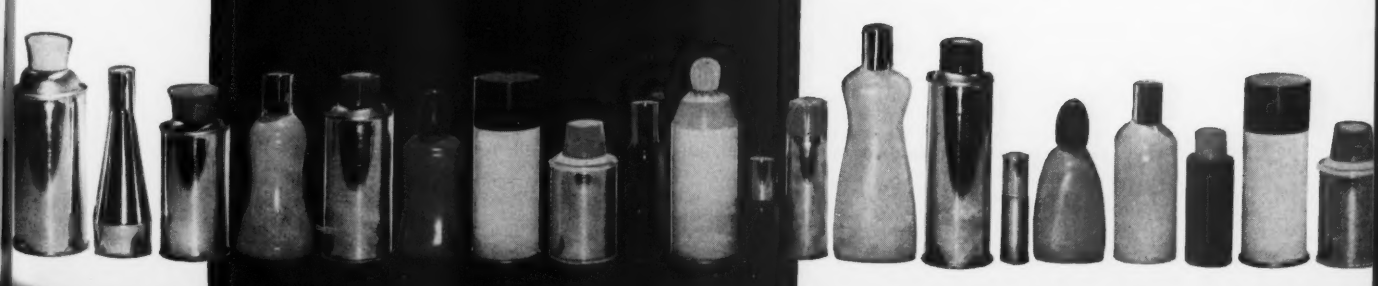

A MESSAGE TO THE COSMETIC INDUSTRY FROM THE PRESIDENT OF RICHFORD CORPORATION

Dear Friends:

The past two decades have been exciting and fruitful years for our industry. Your vision, creativeness, and efforts have brought beauty aids to the women of America never dreamed of by Helen of Troy, Cleopatra or Madame Pompadour.

The area in which we serve, that of packaging design, has enjoyed changes equally spectacular. And since no phase of modern merchandising is of more importance to you, the manufacturer, we feel it proper and useful to state once again the principles that guide us in our efforts to serve you.

In the first place, our goal is that of leadership in the field of cosmetic packaging. Starting with our original Spill-proof® bottles, we have successfully translated new packaging concepts and new materials into useful, low-cost custom styled containers, caps and closures.

Secondly, we have always tried to carry in stock such a flexible variety of packaging elements that you can readily custom-package your products in a distinctive manner without loss of time and without engineering or costly mold expense.

And last but not least, since we know intuitively and by experience that service and integrity are our chief products, we have always resolved to give you honestly the best fruits of our years of experience, our creative ability and our high productive capacity.

That the above principles have been sound is shown by our constant growth. And so, as we enter our third decade of corporate life, we want to thank the many, many firms who have found our service of value, and to suggest that you contact our home office or any of our representatives around the world for assistance in resolving your packaging problems.

Sincerely yours,
RICHFORD CORPORATION

P. E. Roehrich, President

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Paul M. Wagner
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Emmer Glass Corp.
Magic Bottle Div.
6250 Northwest 35th Ave.

Toronto, Canada
Consolidated Bottle Co., Ltd.
27-67 Vine Ave.

Los Angeles, Calif.
R. G. F. Byington & Co.
1260 N. Western Ave.

and overseas in: Sydney, Australia . . . Brussels, Belgium . . . Toronto and Montreal, Canada . . . Guatemala City, C.A. . . . Santiago, Chile . . . Havana, Cuba (presently inactive) . . . Copenhagen, Denmark . . . Mexico, D.F. . . . London, England . . . Karlsruhe, Germany . . . Den Haag, Holland . . . Auckland, New Zealand . . . Lima, Peru . . . Johannesburg, South Africa . . . Malmo, Sweden... Caracas, Venezuela.

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THE AMA AND THE INDUSTRY

(*Continued from page 291*)

practice. This is, after all, the crux of the issue—as far as marketing of drugs goes. A company that has won the confidence of doctors has won everything. The AMA speaks in a single, strident voice. But there are some 200,000 doctors and few of them play any policy role in AMA deliberations. It was noted that at the recent convention in New York the AMA's House of Delegates rejected a proposal to poll members on the question of whether doctors should be covered by Social Security. One of the more rational voices in the ranks of organized medicine belongs to *The New England Journal of Medicine*, a highly regarded publication. In an editorial earlier this year the New England journal urged doctors who disagree with the AMA policies to be active in the association and to present their views. The journal then went on to make these points:

"Many persons believe that marked changes, some of them drastic, should be made in the distribution of medical care; that not only public-health techniques but personal medical attention should become a governmental responsibility; that the traditional private practice of medicine on a fee-for-service basis has become completely outmoded. Tax-supported medical care has come to be looked on as a basic right by those who still would not think of applying the same principles to the provision of food, clothing and shelter on such a scale and without a means test.

"There are, on the other hand, just reasons for criticizing the private practice of medicine as conducted by some individuals. As in every other profession in which the sale of its members' services provides them with their living, there are those in medicine who are incompetent and who exploit the physician-patient relation to their own advantage. Regardless of the method of his payment the good physician is concerned primarily with the well-being of his patient. He can scarcely serve beyond the call of duty because his duty has no prescribed limits. Before he makes his decision to enter the profession he should spend, in effect, his forty days in the wilderness. He should know that he is possessed of humility, a willingness to make personal sacrifice and a sense of dedication. Then he may be given to eat of the hidden manna."

This editorial was reprinted in *The AMA News*, although it is not in the same vein as the typical AMA pronouncement. It stands out as an eloquent restatement of the underlying ethical code of medical practice and—as such—is worth pondering by drug marketers. *The New England Journal of Medicine*, it needs hardly be pointed out here, has been a persistent critic of pharmaceutical advertising—perhaps the only medical publication to have the courage to bite the hand that feeds it. This attitude (other publications, please note!) has only served to enhance its reputation and value among drug advertisers. •

(*Continued from page 296*)

although some side effects have been lessened. Currently studies are being undertaken with another new analgesic, RO4-1778, synthesized by Hoffmann-La Roche, which appears to be as effective as codeine in relieving pain, and yet is less than one-seventh as addictive.

An interesting observation has been that the new muscle relaxants Soma (Wallace) and Analexin (Irwin Neisler) also display analgesic qualities. It is not always easy to determine whether this is a true analgesic effect or whether the analgesia produced is secondary to a muscle relaxant action, which by itself is a pain-relieving measure.

For the treatment of the various forms of gastritis and also for esophagitis, Wyeth Laboratories developed a mucosal anesthetic under the name of Oxaine. Winthrop Laboratories marketed an analog of lidocaine as a local anesthetic that does not require the simultaneous use of a vasoconstrictor such as epinephrine. The drug is sold under the name of Carbocaine.

Dermatology

The skin is an extremely versatile cell structure and reacts in a thousand different ways. No wonder each year many new preparations are recommended for its various illnesses. During the last two years, 97 new products and dosage forms were marketed for this purpose. Among these are antipruritics, corticoid hormones—some specially designed—emolients, antiseptics, fungicides and many others. The most outstanding development during this period was the fungicide griseofulvin, now marketed by three firms in this country. Griseofulvin was isolated by English investigators in 1939. In 1946 it became a successful agricultural fungicide. Its usefulness in human medicine was only discovered in 1958. Its uniqueness is based on the fact that it is effective in ringworm infections on oral administration.

Antiinflammatory Agents

The most active antiinflammatory agents are, of course, the corticosteroid hormones. But there has become available a group of nonhormonal products which are receiving a growing attention. Among these are the enzymes trypsin and chymotrypsin, streptokinase and streptodornase. Another enzyme is alpha amylase (Buclamase-Rystan), which is especially recommended for the treatment of athletic injuries. Fibrinolysin is recommended for two purposes—it is given intravenously for the treatment of venous thrombosis and pulmonary embolism. Unfortunately the reaction rate is still high and further purification seems indicated. The second use of fibrinolysin, in this case obtained from a bovine source, is topical. The enzyme is combined with desoxyribonucleic acid (Elase-Parke, Davis) and is suggested

(*Continued on page 342*)

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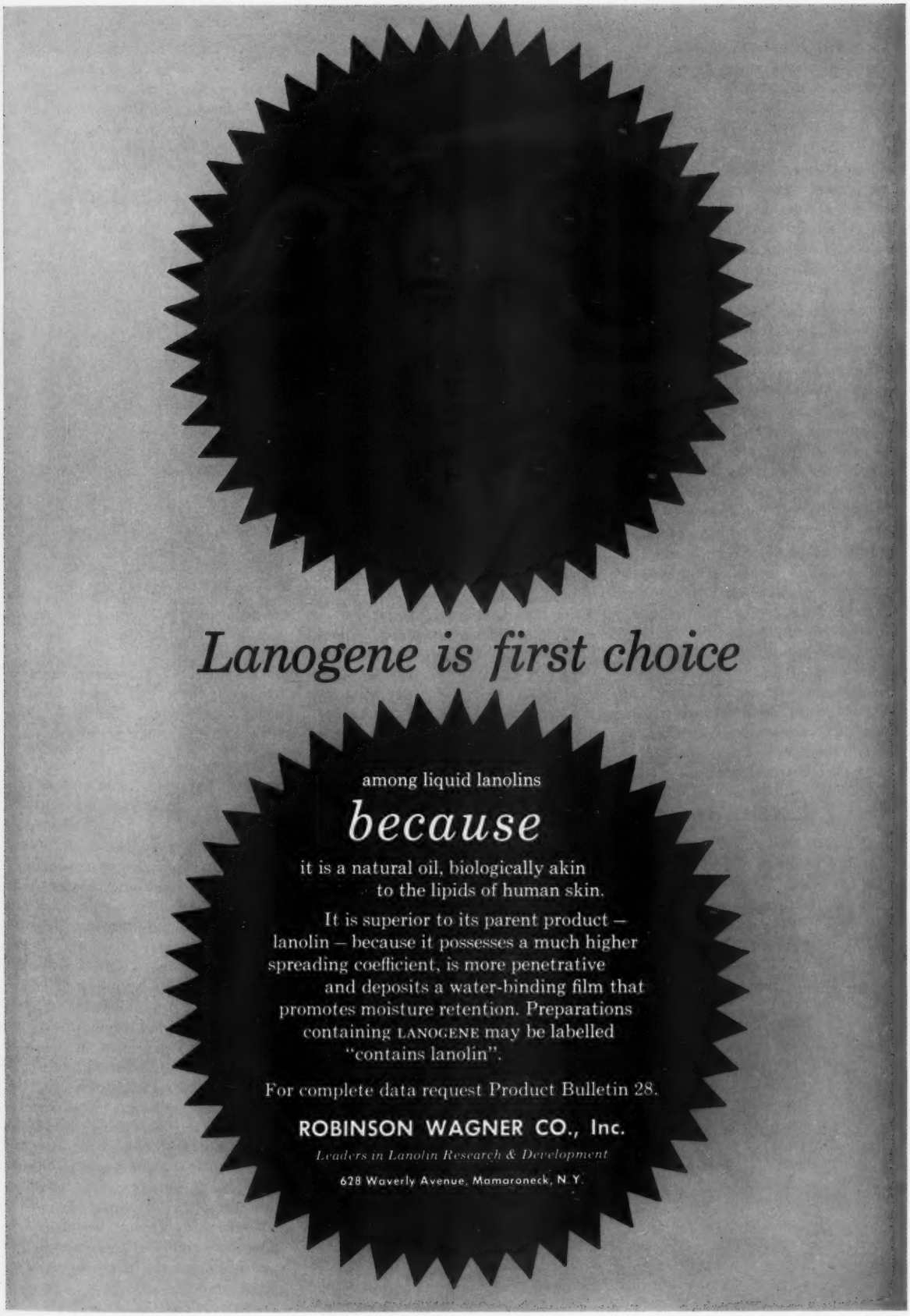
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NEWS

People . . .

Caspari Elected Board Chairman

Charles E. Caspari, Jr., an attorney for Mansanto Chemical Company, has been elected chairman of the board of trustees of the St. Louis College of Pharmacy.

Verona Executive to Europe

R. W. Montgomery, co-manager and in charge of all sales activities for Verona Aromatics, has left with his wife for a trip to Europe. The couple will visit Germany, France, and England, where Mr. Montgomery will call on friends of Verona. He will also spend some time with Haarmann & Reimer GMBH, Holzminden, West Germany, with whom Verona has a close business association.

Schwartz Receives A.S.T.M. Award

Dr. Anthony M. Schwartz, assistant director of Harris Research Laboratories, Inc., has received an American Society for Testing Materials of Merit for 1961, in recognition of his work in the field of soaps and detergents.

Phila. College President Named

At a recent special meeting of the members of the Philadelphia College of Pharmacy and Science, Dr. Vincent J. Keenan was elected to the presidency, to serve the unexpired term of Dr. Ivor Griffith, who died May 16, after holding this office for over 20 years.

Samuel P. Wetherill, chairman of the board of trustees, has served as president in the interim.

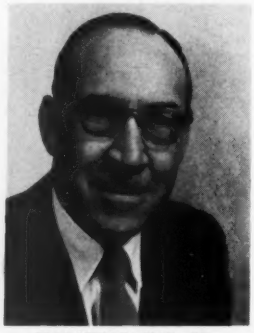
Dr. Keenan has had a wide range of experience in industrial research through his association with the U.S. Rubber Company and the Atlantic Refining Company. Since 1959, he has served as scientific adviser to the Defense Department with the Institute of Defense Analysis, in Washington, D. C.

Meer Elected Assoc. President

Ellis Meer, president of Meer Corporation, has been elected president of the Water Soluble Gum Association. Mr. Meer has been associated with the industry since 1926 and has been a member of the association for the past ten years.

Retirements

Franklin B. Peck, Sr., M.D., director of clinical research, international division, for Eli Lilly and Company, has retired. He has been



FRANKLIN B. PECK, SR.

with the company for 25 years and has held a number of managerial positions. In 1942 Dr. Peck founded and was editor of *Diabetes Abstracts* and was later instrumental in founding *Diabetes*, now the official journal of the American Diabetes Association, Inc.

Dr. Harry E. Sagen, manager of biological control at Abbott Laboratories, has retired after more than 26 years of service with the company.

Expansions, New Plants and Acquisitions . . .

Pfizer Builds and Buys

Charles Pfizer & Company, Inc., is establishing a manufacturing plant in Nationalist China this year. Pfizer Pharmaceutical (Taiwan), Ltd., is a wholly owned subsidiary, and will employ about 70 persons. Production is scheduled to start in May, 1962.

Pfizer is also planning construction of a new poultry diagnostic center at Springdale, Arkansas. Scheduled for completion by early fall, the facility will be the company's third such laboratory.

The modern one-story building is designed to serve broiler and egg producers in Arkansas by helping to curb the heavy financial losses resulting from poultry diseases each year, and will be available to any grower in the state, regardless of the size of his flock. The building will include isolation wards for birds and a large autopsy room with facilities for complete on-the-spot diagnosis, including histopathology. Prompt prescription of medication for the specific diseases or stress conditions will be made.

The signing of a contract for the acquisition by Chas. Pfizer & Co., Inc., of the assets and business of New England Lime Co. in exchange for approximately 300,000 shares of Pfizer common stock has been announced jointly by John E. McKeen, chairman and president of Pfizer, and C. C. Loomis, chairman of New England Lime. It was stated that the acquisition price was computed on the basis of 1.5 shares of Pfizer for each outstanding share of New England Lime and is subject to the approval of New England Lime share owners.

The New England company maintains its headquarters and operates a limestone quarry and plant at Adams, Mass. Nelco Metals, Inc., a subsidiary, produces high purity metallic calcium and magnesium in addition to limestone products in Canaan, Conn. The acquisition by Pfizer will include the stock of this subsidiary.

Parke, Davis Buys Sites in Buffalo and Camden

Parke, Davis & Company is planning construction of a new warehouse in Buffalo, N. Y., on a recently purchased eight-acre site on the Niagara Thruway. Preliminary planning for the new building, which will replace the pharmaceutical firm's operation at 752 Main Street, in Buffalo, calls for completion of the 25,000-square foot warehouse by next spring. The new distribution center will be under the supervision of the company's Pittsburgh branch.

Construction for a second new distribution center is planned for

a five-acre site near Camden, New Jersey, recently purchased by Parke, Davis. The 40,000 square-foot branch warehouse, to be located four miles northeast of Camden on Route 38, will replace the present Parke-Davis distribution depot at 333 East Hunting Park Ave., Philadelphia, and will be under the supervision of the pharmaceutical firm's Baltimore branch. Completion is scheduled for the fall of 1962.

Meer Corporation's new 200,000-cubic-foot warehouse at the North Bergen, N. J. plant.

New Warehouse for Meer

A new 200,000 cubic foot warehouse which can store two million pounds of botanicals has been constructed by Meer Corporation at its North Bergen, N.J., plant. To eliminate double handling of shipments, trucks can be driven into the building on one side, unloaded by fork lift trucks and then driven out the other side.

New Company In Venezuela

A new and independent pharmaceutical processing plant in Maracaibo, Venezuela, jointly owned by Schering Corporation and Laboratories Belloso de Venezuela, has opened its facilities for contract manufacturing of drug and cosmetic products in that country for firms in the United States and elsewhere.

The new company, Productos Farmaceuticos de Venezuela, C.A. (Profar), provides drug and cosmetic firms currently exporting to Venezuela with the opportunity to establish a local manufacturing business without the need for capital investment.

The company's production and packaging lines are equipped to handle injectibles, tablets, ointments, liquids and capsules. A fully staffed quality-control laboratory is set up to maintain product specifications. Warehouse and shipping areas, administrative offices and building services complete the facilities. Full production is expected by January 1962.

Hooker Chemical Buying Argentine Firm

Hooker Chemical Corporation, has announced that it will exercise its option to purchase enough stock of a new Argentine phenol and monochlorobenzene producer, Duranor, Industrias Quimicas Sociedad Anonima Industrial y Comercial, to bring its interests to 50 per cent. An equivalent investment in the jointly owned company will be held by a major Argentine manufacturer of chemicals and plastics, Atanor, Compania Nacional para la Industria Quimica, S.A.M., of Buenos Aires. The Export-Import Bank of Washington, D. C., has agreed to loan Duranor $2 million for purchasing necessary chemical plant equipment in the U. S. Shipment of the equipment is expected to begin late this month, and ground will be broken in about three months. The new Duranor chemical plant is Hooker's first step in a planned expansion of company activities in Argentina.

Thatcher Glass Moves

The Thatcher Glass Manufacturing Company has completed a 1400-mile move of its plastic tube manufacturing plant from Nashua, New Hampshire to Muscatine, Iowa, a transfer accomplished without missing a single day's production during the interim.

The move is one aspect of a $1,200,000 expansion program to triple Thatcher's production of vinyl, polyethylene and polypropylene plastic squeeze tubes. It also served to place plastic tube production in its centralized Iowa plant, where the company also maintains its Celon closure division plant, thereby consolidating research and laboratory facilities for both closures and tubes.

Henry E. Griffith, vice-president in charge of plastic container marketing, will direct sales of plastic tubes from Thatcher's executive offices at 375 Park Ave., N. Y. C.

Merck Expands Again

Merck & Company, Inc. plans another major expansion at its Elkton, Virginia plant which produces Amprol. Production facilities will be increased 40 per cent, at a cost of $2 million, and will go on stream in February, 1962. The new expansion follows a 50 per cent increase in facilities initiated early this year.

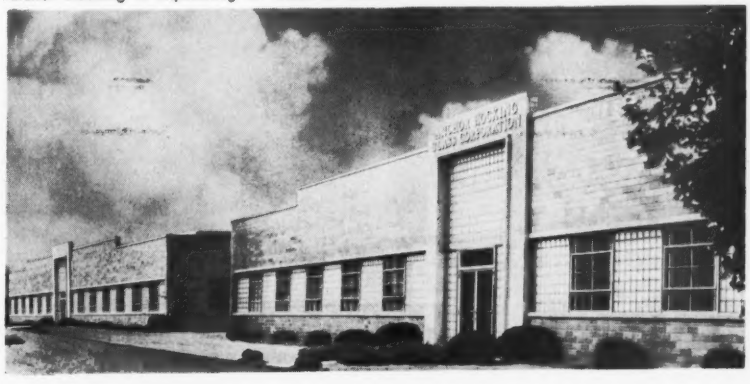
J&J Builds

Johnson & Johnson Company has formed a Jamaican subsidiary and has started construction of a plant to manufacture toothbrushes, baby powder and personal products for West Indies markets. J&J West Indies Limited will operate under the island's incentive laws, which grant tax and other concessions to manufacturing investors. The plant is located on the industrial estate of the Jamaica Industrial Development Corporation at the capital city of Kingston.

Anchor Hocking Expands Research and Engineering Center

A new building now under construction at Anchor Hocking's Research and Engineering Center in Lancaster, Ohio, will house 13 laboratories and departments. It is slated for completion and occupancy by November of this year.

Anchor Hocking is expanding its Research Center with construction of a second unit on right.



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Specific Gravity (20/20°C) max	0.7911
Specific Gravity (60/60°F) max	0.7942
Acidity, as acetic acid (wt per cent) max	0.002
Color (Pt-Co) max	10
Non-volatile Matter (mg/100 ml) max	2.0
Distillation (°C)	
Initial min	77.5
Dry Point max	79.0
Permanganate Time (minutes) min	25
Residual Odor	Nil
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Max Factor Acquires Stock

Max Factor & Company has acquired all the outstanding capital stock of Parfumerie Internationale Corday, Paris; Parfums Corday, Inc., New York and subsidiary corporations. Corday will become a wholly owned subsidiary of Max Factor, with the present management retained.

Stokes Establishes New West Coast Facility

The F. J. Stokes Corporation of Philadelphia has opened a new West Coast facility at 3761 E. Colorado Boulevard, Pasadena, Calif., for its customers in Calif., Ariz., Nev., Utah, Wy., Idaho, and Mont. It will also be utilized by Walsh Associates of Seattle, Stokes' representatives in Wash., Ore., and Alaska.

Penick & Ford to Acquire Morningstar-Paisley

A proposed merger, under which Penick & Ford, Ltd., New York, would acquire Morningstar-Paisley, Inc., New York, has been approved by directors of both firms. A special meeting of M-P stockholders will be called for a vote on the merger.

As a division of Penick & Ford, Morningstar-Paisley would continue to handle its existing product line: potato starches and dextrins, water-soluble gums, liquid adhesives, synthetic resins and polyvinyl acetate emulsions.

Penick & Ford is a major corn refiner, producing starches, syrup, dextrins, oils and cattle feeds. It is also in the packaged food business. The company's sales in 1960 were $55,525,038, with net profits of $4,737,611.

Under terms of the proposed merger, common stockholders of Morningstar-Paisley would receive 0.385 of a share of Penick & Ford common stock for each share of Morningstar-Paisley.

B-I-F Joins New York Air Brake

B-I-F Industries, manufacturer in the fields of automatic flow control, measurement, and weighing of gases, liquids, and solids, and equipment and engineered systems for many process industries, as well as water works and sewage and industrial waste treatment plants, has announced that negotiations have been completed, and that B-I-F is now a division of the New York Air Brake Company. B-I-F continues in Providence, Rhode Island, under the same operating management, but is now, through New York Air Brake, associated with Aurora Pump, Feedback Controls, Hydreco, and Kinney Vacuum.

Lowenstein Forms An Affiliate

Jos. H. Lowenstein & Sons, Inc., has formed an affiliate, Lowenstein Dyes & Cosmetics, Inc. The plant and laboratory, to be in operation by September 1961, will occupy a second story above their present location at Morgan Avenue and Withers Street, Brooklyn, N.Y.

Armour Builds New Plant

Armour Pharmaceutical Company plans construction of a new synthetic organic pilot plant at Kankakee, Ill. The new facility will be erected just south of the present plant and will be used for the manufacture of clinical quantities of promising new drugs to be evaluated for new medical uses and for the development of new product in processes.

Facilities for conducting various organic reactions will be available as well as equipment for high vacuum distillation, filtration, centrifugation and drying. The new building will have a fully equipped, air-conditioned laboratory which will also serve as an operating point for remote control of reactors.

Construction is expected to be completed by the end of December.

Nichols Establishes Spray Dryer Laboratory

Nichols Engineering & Research Corporation has established a spray dryer laboratory at 1336 North Carolan Avenue, Burlingame, Calif., under the direction of Frank J. Murray, Jr.

New Building for Plax

Plax Corporation is erecting a one-story manufacturing building of approximately 146,000 square feet on a 15-acre plot in Yardville, N. J. It is expected to be ready for occupancy in the fall.

Ultra-Pak Gets New Headquarters

Full-scale operation of Packaging Frontiers, Inc, a subsidiary of Bemis Bro. Bag Company, and producers of the new Ultra-Pak packaging system, will begin soon. Its new headquarters building at Waltham, Mass., is already completed.

Packaging Frontiers handles the development and marketing of the Ultra-Pak packaging machine, for which Bemis now has exclusive world-wide patent rights. The machine, which forms, fills, and seals the flexible tetahedron package in one continuous operation, is available for long-term lease.

Naarden Takes Over Raw Materials Company

N. V. Chemische Fabriek Naarden, Holland, has taken over the capital of a company established within the European Common Market, which produces organic chemical raw materials, and has branches outside of Europe.

The new concern will be placed with the subsidiary company in Paris, S.A. Naarden (France).

Celanese Plastics Expands

Celanese Plastics Company, a division of Celanese Corporation of America, will expand production of blow-molded plastic containers in the Midwest and on the East Coast, through a new plant in Batavia, Ill. When the new building is completed in October, production of blow-molded containers will be transferred to Batavia from the present plant in Chicago.

The company has also purchased a plant building in New Castle, Del., and will transfer blow-molded container production there from Trenton, N.J., within about three months.

Vitamix Acquires Preston National

Vitamix Pharmaceuticals, Inc., of Philadelphia has arranged for the purchase of the assets and properties of Preston National Drug Company, a Texas corporation, for an undisclosed amount of cash and Vitamix stock.

Preston, a manufacturer and distributer of pharmaceuticals specializing in over-the-counter items packaged under its own and private brand names of customers, will be operated as a wholly owned subsidiary of Vitamix. The present management, consisting of sales and factory personnel, will continue, under the supervision of Vitamix Pharmaceuticals, Inc. management.

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Company News . . .

Wheaton Tells Its Story

"The Wheaton Story," a pictorial story of Wheaton Industries, has been published by Wheaton Glass Company. The attractive, cloth-bound book describes the development of the nine diversified Wheaton companies and its 13 affiliates throughout the world. The book also contains accounts of the people who founded and have since guided this growth, as well as of the various types of manufacturing Wheaton conducts.

Thatcher Licenses Peerless To Manufacture Plastic Tubes

Thatcher Glass Manufacturing Company has licensed Peerless Tube Company to manufacture plastic squeeze tubes. Under the terms of the agreement, Thatcher, glass and plastic container manufacturer, and Peerless, collapsible metal tube and aluminum aerosol manufacturer, will also offer technical and research assistance to each other in the manufacture of squeeze tubes.

Frederic Remington, president of Peerless has also disclosed that his company plans to break ground shortly for a new addition to its plant in Bloomfield, N. J. This will provide Peerless with an additional 33,000 square-feet of manufacturing and warehouse space and is part of a new $500,000 expansion program.

New Foam Molding Plant

Henolite Products, Inc., a newly formed corporation for molding of foam polystyrene products will begin operations in its new plant at 100 Bridge Street, Phoenixville, Pa., early this fall.

Henry C. Lavely, president, said that the company is equipped to produce a wide variety of products from Dylite expandable polystyrene, a product of the Plastics Division of Koppers Company, Inc.

Electron Accelerator To Sterilize Surgical Products

The sale of an electron accelerator to Smith and Nephew, Ltd., Hull, England, for the production sterilization of bandages, plasters, and medical dressings has been made by High Voltage Engineering Corporation, Burlington, Mass. The installation of a 4-million-electron volt, 4-kilowatt accelerator will be the first in-plant use of machine radiation for pilot production outside of the United States.

The accelerator directs a beam of electrons through a 15-inch scanner, sterilizing the pre-packaged product on a conveyor line. A research and development program carried out over a period of years by Smith and Nephew Research, Ltd., led to the decision to use machine radiation in favor of radioactive sources.

Metal Box and Shorko Form Joint Company

Agreement in principle has been reached between Metal Box Company, Limited, and Shorko, equally owned by National Distillers and Chemical Corporation and the Royal Dutch Shell Group, to form a joint company in the United Kingdom for the manufacture and sale of plastic film and packaging materials.

Judges for the 1961 Old Spice Father's day Display, annual competition sponsored by Shulton, shown making their selection of winners. Left to right: Frazer V. Sinclair, Publisher, Editor, *Beauty Fashion;* G. Boswell, Retail Promotion Manager, *Chain Store Age;* L. Kazin, Editor, *Drug Topics.*

Lancome Sells Franchise

Lancome of France has sold an exclusive franchise for the distribution of its products to the United States. The company was formerly operated directly from Paris.

PHILIP J. SAGONA

Philip J. Sagona has become the new president of Lancome Sales.

Alan Shepard Accepts Award

In honor of Father's Day, Parfums Corday presented Commander Alan B. Shepard, with a sterling silver engraved Tiffany bowl, filled with the company's toiletries, which he warmly accepted.

Gifford-Wood Appoints Southeastern Agent

John R Davis & Company, southeastern equipment sales organization, has been appointed as general sales agents for the Eppenbach Division of the Gifford-Wood Company. The general sales offices, under the direction of John R. Davis, president, are at 3038 Surrey Lane, Chamblee, Ga.

New Locations

Ives-Cameron Company, division of American Home Products Corporation, has moved its executive offices, from Madison Avenue to new and larger quarters at 685 Third Avenue, New York City 17. . . . **Flam-Haft Laboratories, Inc.,** has moved to 832 Broadway, New York City 3. . . . **American Cyanamid Company's Surgical Products Division's** executive offices have been moved from the company's New York headquarters to the division's main plant in Danbury, Conn. . . . The Bradley-Sun Division of American Can Company has moved its main office to new and improved quarters on U.S. Highway 22, Union, N. J. Telephone: Murdock 7-2500.

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No mere adaptations or improvisations, Synfleur perfumes for aerosols are specially developed to meet the problems and challenges of aerosol dispensing and create repeat sales.

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Association News . . .

Swintosky Elected

The Philadelphia Branch of the American Pharmaceutical Association has elected Dr. Joseph V. Swintosky of Smith, Kline & French Laboratories as president. Other new officers include Dr. Thomas J. Macek, Merck, Sharp & Dohme, vice-president; Dr. Harry Kostenbauder, Temple University, secretary; Dr. John Mullins, Merck, treasurer.

Dr. Linwood F. Tice, dean of pharmacy, Philadelphia College of Pharmacy and Science, was awarded the Third Pharmacy Achievement Award of the Philadelphia branch.

AMA Appoints

B. E. Lowenstein, M.D., has been appointed assistant secretary to the Council on Drugs of the American Medical Association. Dr. Lowenstein has taught at Harvard Medical School, Yale Medical School and N. Y. Medical College, and was, for ten years, chief of metabolic services at Dade County Hospital, Miami, Fla., and in private practice. His areas of medical interest are thyroid and adrenal cortex physiology and chemistry; diabetes and hypoglocemia; nutrition; blood capillary physiology, and cancer.

The AMA has appointed Margaret J. Cambier, M.D., and Roland J. Main, Ph.D., as assistant secretaries to the Council on Drugs. Dr. Cambier has served as consultant in pediatrics to the Crippled Children's Division of the Arizona State Department of Health and was resident psychiatrist for the children's unit of Creedmore State Hospital, Long Island, N. Y. Dr. Main has been with Eaton Laboratories for the past 16 years, where he served as medical editor, director of advertising and scientific information and, most recently, as director of public and professional relations.

The AMA's Council on Drugs, established in 1905, is developing an expanded and intensified program to provide physicians with early unbiased information on all types of new drugs and drug therapy.

SCC 8th Annual Seminar

The Society of Cosmetic Chemists will hold its 8th annual cosmetic seminar on September 26 and 27, 1961, in the theatre of the Barbizon-Plaza Hotel, 106 Central Park S., N. Y. C.

Dr. H. W. Zussman, chairman of the Seminar Committee, has arranged a program on biological activity in cosmetics. The papers are: The Problem of Biological Activity in Cosmetics, by Emil Klarmann, Ph.D., Lehn and Fink; Anti-inflammatories, by Norman Orentreich, M.D., New York University School of Medicine; Effects of Estrogens on Sebacesus Glands, by John Strauss, M.D., Boston University School of Medicine; The Use of Fluorides in Anti-cariegenic Dentifrices, by D. S. Barrie, Proctor & Gamble; Ultraviolet Absorbers by John M. Knox, M.D., Baylor University School of Medicine; Enzymes by K. L. Howard, Ph.D., Wallerstein Laboratories; Vitamins by H. Rubin, Ph.D., Hoffmann-La Roche; Anticholinergics by J. F. Migliarese, Ph.D., Colgate-Palmolive; Should Bacteriostats be Added to Toilet Soaps, by W. M. Linfield, Ph.D., and R. E. Casely, Armour & Company, Grocery Products Division; Antibiotics, by Vincent de Gennaro and R. E. Mackey, Chas. Pfizer & Co.; Skin-bacteriostat Relations, by Thomas Furia, Geigy Industrial Chemicals; Mechanisms of Bacteriostatic Action, by Eugene D. Weinberg, Ph.D., Indiana University.

At the recent Cosmetic Industry Buyers & Suppliers Assoc. luncheon, Hotel Pierre, N. Y., l. to r.: 1st vice-pres., J. Volt, George Lueders; S. Mayham, TGA executive vice-pres., and guest speaker; pres., R. Ring, Duveen Soap; luncheon chairman, W. Morton, Hazel, Atlas Glass Div.

Appointments and Promotions. . .

Herbert F. Storfer (p. 338) has been elected president and a director of Parfums Corday, Inc., a wholly owned subsidiary of Max Factor & Company. Formerly executive vice-president of Parfums Corday, Inc., he has been active in the company and the perfume industry since 1945.

Witco Chemical Company, Inc., has elected **Rudolf G. Sonneborn** chairman of the board and **William Wishnick** (p. 338) president and chief executive officer of Sonneborn Chemical and Refining Corporation. Mr. Sonneborn was president of the company and Mr. Wishnick remains as vice-president. Both continue as Witco directors.

Robert W. Wilson, Jr., (p. 338) has been appointed executive vice-president of Reheis Company, Inc. Serving as a Reheis vice-president since 1959, he was founder and former president of Tec Chemical Corporation until its merger with Reheis in 1959.

Mead Johnson & Company has appointed **Dr. Ben King Harned** to the newly created position of vice-president, international research and development. Dr. Harned joined Mead Johnson in 1952 as executive director of research when the company first entered the pharmaceutical research field and ex-

panded nutritional research. He was named a vice-president in 1954 and elected to the board of directors in 1957. Succeeding Dr. Harned as vice-president of research and development, and director of the Mead Johnson Research Center is **Dr. Richard T. Arnold**, previously vice-

HERBERT F. STORFER

president, research. Dr. Arnold joined Mead Johnson in 1959 upon resigning the position of administrator of the basic science program for the Alfred P. Sloan Foundation in New York. Before that, he had headed the department of chemistry at the University of Minnesota, where he served on the faculty for 18 years. **Dr. Coy W. Waller**

WILLIAM WISHNICK

(above r.) succeeds Dr. Arnold as vice-president, research. Dr. Waller, formerly chemical research director, joined Mead Johnson in 1957 as director, Division of Chemical Research. He served for seven years on the faculties of Washington State College and the Universities of Buffalo and Minnesota. He also did research for 13 years at Lederle Laboratories. **Dr. Robert J. Williams** has been named marketing research director of Edward Dalton Company, Evansville, Ind., a division of Mead Johnson & Co. Dr. Williams has been with Alfred Politz Research, Inc., in New York for the past four years, most recently as vice-president and project director.

F. Ritter & Company has appointed **Richard Y. Kitsuse** (below) director of research and development. A member of the American Chemical Society and the Institute of Food Technologists, he has spent 10 years in the flavor and food industry.

Frank Golden (p. 339) now holds the newly created position of general manager of domestic purchasing and packaging at Chesebrough-Pond's, Inc. He joined General Foods Corporation in 1938 and has served for the past five years as

ROBERT W. WILSON

manager of packaging and merchandise services there. **William B. Jordan III** has been elected treasurer of Chesebrough-Pond's, Inc., succeeding William C. Watson, who continues as vice-president of finance and president of the company's international division. Mr. Jordan was previously a vice-president of S. H. Kress & Company.

Gerald H. McGinley, (p. 339) new marketing manager of machinery sales in Baltimore for Crown Cork & Seal Company, Inc., has been district sales representative in New York. Before joining Crown in 1958 he was on the administrative staff of the W. R. Grace Company.

F. J. Stokes Corporation has announced that **F. Theodor Hahn** is now district manager of the company's new West Coast facility. He has been a field sales engineer for the company in upstate New York since 1957. **Albert V. Bicknell,** now sales engineer for Stokes' press division on the West Coast, has been an independent manufacturers' representative for the past six years. **James A. Fox,** sales engineer for Stokes' Vacuum Equipment Division, has been West Coast regional manager for the Duralith Corpo-

COY W. WALLER

ration of Philadelphia. **John A. Kershaw,** who joined Stokes in 1939 and served most recently in customer service operations, is now district service engineer for Stokes' West Coast facility.

Charles Murden, John A. Gwin, Robert Howkey, David E. Flood and **J. H. Schlueter** have been ap-

RICHARD Y. KITSUSE

pointed packaging sales representatives of the Gardner Division of Diamond National Corporation.

Alpine Aromatics has named **R. J. Salyerds** as sales manager and technical representative in the East. Mr. Salyerds has been a vice-president of Harwick Standard Chemical Company of New Jersey.

Dr. Jerome G. Kaufman has become director, chemical research and production, for Fleuroma, Inc.

Dr. Kaufman will integrate the development of new and original aromatic chemicals with pilot and plant production. **David J. Warner,** with Fleuroma for the past seven

FRANK GOLDEN

years, has been appointed field sales manager.

Pennsalt Chemicals Corporation has appointed **Herbert Benedict** midwestern sales representative for the Isotron Department, with responsibility for Isotron refrigerants and aerosol propellents. Pennsalt has elected **James McWhirter,** general manager of the Industrial Chemicals Division, a vice-president of the company. Mr. McWhirter, with the firm since 1945, was responsible for building Pennsalt's first hydrofluoric acid unit.

Robert B. Clark, now vice-president of Warner-Lambert Pharmaceutical Company, continues as president of Warner-Chilcott Laboratories Division. He joined Warner-Lambert in 1947 as a patent attorney. **Dr. Martin Winbury** has been appointed director of pharmacology in the basic sciences division of Warner-Lambert Research Institute. Dr. Winbury was formerly with the Schering Corporation. **Dr. Gunther H. Frey,** formerly assistant medical director of Carter Products, is now assistant director of medical research services for the Institute. Two additional appointments to the Institute staff are **Dr. Albert Meli,** formerly with the Sterling-Winthrop Research Institute, and **Dr. Raymond Wittekind,** formerly with McNeil Laboratories. **Ronald Helps** has been promoted to vice-president of Nepera Chemical Co., Inc., a subsidiary, and **Tam Noyes** has been appointed fashion coordinator for Warner's DuBarry, Richard Hudnut, Ciro and Sportsman lines.

Atlas Chemical Industries, Inc., has elected four additional vice-presidents and a new corporate secretary. The new vice-presidents are: **Robert P. Barnett,** who continues as general manager of the company's international division; **Robert J. Reilly,** who continues as treasurer but relinquishes the office of secretary; **Dr. Walter H. C. Rueggeberg,** who is also director of research and development, and **W. Spencer Thompson,** director of industrial relations. **Thomas J. Laffey, Jr.,** general counsel of the company, succeeds Mr. Reilly as secretary.

Roland F. Hallett has been elected vice-president and treasurer of the Rexall Drug and Chemical Company succeeding **Walter T. Lillie,** who is retiring from these positions, which he has held since 1951. Mr. Lillie remains chairman of the board of the Owl Drug Co., a wholly owned subsidiary. **Benjamin H. Dorman,** with Rexall since 1940 as assistant general counsel, becomes general counsel, succeeding Mr. Hallett.

Lanolin Plus has chosen **Charles J. Wade** as a vice-president. Before joining the company in 1959, he was comptroller of Adamas Carbide Corporation in New Jersey.

Arthur P. Morgan, formerly vice-president of Empire Trust Company, is now vice-president and manager of company acquisitions services for Richardson-Merrell, Inc. Mr. Morgan had been general manager of operations in Uraguay and Argentina, and in charge of all eastern Latin American operations for E. R. Squibb and Sons, before he joined Empire in 1955.

Anchor Hocking Glass Corporation announced the following organizational changes at Lancaster, Ohio: **S. B. DeMerell,** former vice-president in charge of the package division, is now a senior vice-president of the administrative division of the corporation; **W. B. Snell, Jr.,** vice-president, continues a special assignment to implement manufacturing cost reduction programs and, upon its completion, will concentrate on personnel administration; **Gordon W. Herrold,** vice-president, succeeds Mr. Snell as vice-president manufacturing; **E. M. Lawrence** is now vice-president, sales, of the package division.

GERALD H. McGINLEY

V. D. Mattia, Jr., M.D., with the company since 1957, has been appointed vice-president for marketing at Hoffmann-La Roche, Inc. Dr. Mattia continues as general manager of Roche Laboratories. **Gerard G. Hunt** has been promoted to the newly created position of assistant to the vice-president for marketing, Hoffman-La Roche. He has been with the company since 1950.

Sterling Drug, Inc., has announced the following executive promotions: **Stephen L. J. Adam** to divisional vice-president, Sydney Ross and Winthrop Products; **Warren C. Scheppy** to assistant treasurer, Sydney Ross; **Joseph J. O'Brien** to assistant treasurer, Sterling Products International; and **John R. Rohfritch** to assistant treasurer, Winthrop Products.

Harold H. Webber, vice-president and director of Cowles Magazines and Broadcasting, Inc., and formerly executive vice-president of Foote, Cone & Belding, has been elected consumer relations vice-president of Lever Brothers Company. He will also serve on the firm's marketing committee.

Richard Lewisohn, Jr., and **Theodore Birnbaum,** both of Venus Pen and Pencil Corporation, have been elected directors of Charles of the Ritz, Inc.

Erratum

August DCI promoted **D. J. Warner** of Fleuroma to sales manager. He is field sales manager.

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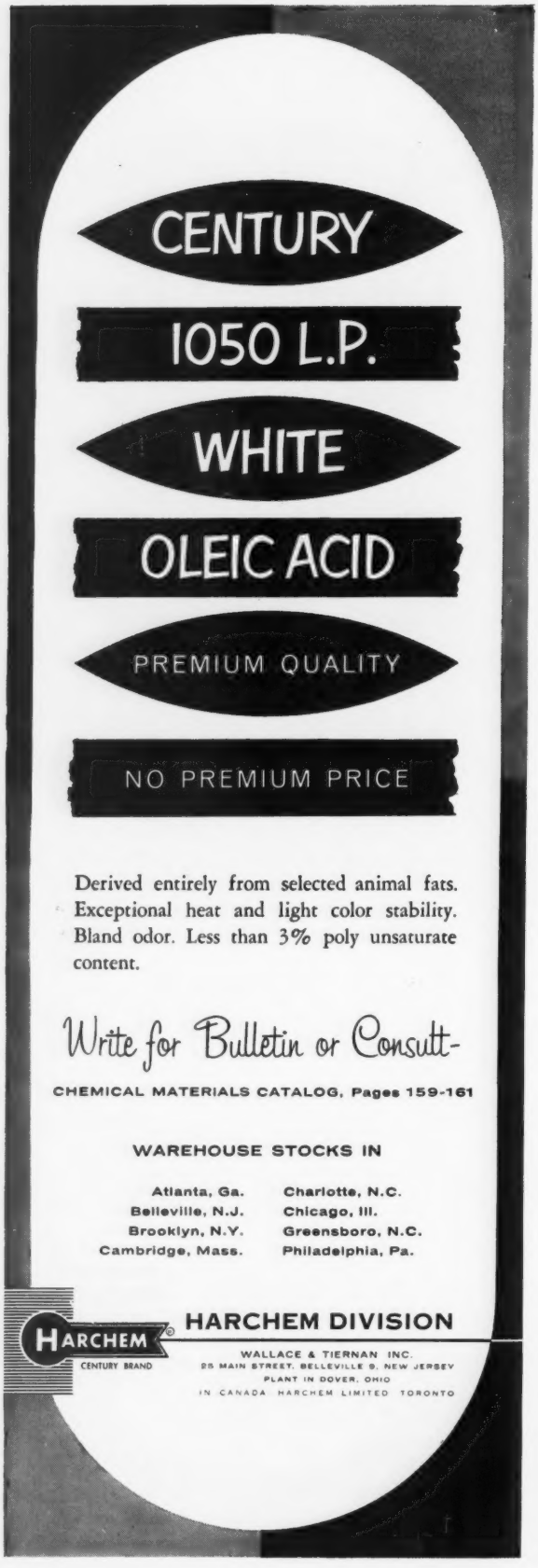

(*Continued from page 327*)

for the removal of necrotic tissue in gynecological disorders and in the promotion of wound healing.

An antiinflammatory agent of an entirely different class is oxyphenbutazone (Tandearil-Geigy), a metabolite of the well-known phenylbutazone. The major indications for oxyphenbutazone are rheumatoid arthritis and related disorders, as well as acute superficial thrombophlebitis, and the severe forms of a variety of acute local inflammatory conditions.

Vaccines

Progress has been made in the isolation and manufacture of vaccines, especially as applied to polio vaccine. Current studies suggest that the time is not far off when we shall be able to use an oral polio vaccine. Additional multiple vaccines have also become available, and experiments are being carried out by several firms with a vaccine for measles. Consequently, it seems that, in spite of the progress of chemotherapy, biologicals will continue to play an important role in the armamentarium of the physician.

Muscle Relaxants

Muscle relaxation has proved to be an important therapeutic measure, not only in surgery but also in various disease conditions. The purpose of the use of muscle relaxants is to break the vicious cycle of spasm —pain—more spasm. The most recently introduced drugs are carisoprodol (Soma-Wallace), a close relative to meprobamate, and chlormethazone (Trancopal-Winthrop) which is also used successfully as a tranquilizing agent. Because of the importance of this indication, we can probably expect that new drugs will be developed in this field.

Side Effects

Drugs have always produced side effects and will continue to do so. With the synthesis of more potent drugs the problem has only become more acute. The important thing is to know what side effects to expect and to guard accordingly. This is where manufacturers in the past have not always fulfilled the physician's desire for knowledge. This situation has changed considerably, and the brochures of recently introduced drugs provide full information in this respect. I think we must also learn to live with a certain number of side effects, and the patient must be taught that they are part of the treatment, just as in the past he thought a medicine was no good unless it tasted bitter. All these things must be looked upon in the proper proportion. If side effects are serious, the drug must obviously be used with great caution. In other instances it must be assumed that side effects are only an indication of the effectiveness of the drug, as in the case of anticholinergics and products used for the chemotherapy of cancer.

But what of the future? During the last 15 years, the pharmaceutical industry has been fortunate to be

able to develop what one might call high-priced Cadillac type of products for the treatment of specific diseases and conditions. I think the industry will have to buckle down and produce some Ford type of preparations, even of the compact variety, which have a wide application.

We have learned to cope with many acute conditions, especially of the infectious type. With age changes in the population, the demand for the treatment of chronic conditions is bound to increase. Arteriosclerosis, mental diseases, debilitating conditions, arthritis, and others will make an increasing demand on the chemist's imagination. I can also foresee that within 20 years not only the public health official but also the individual physician will pay much more attention to preventive medicine. Many products will have to be developed for this purpose and used for long-term preventive therapy. Consequently the challenge for new and improved products will always be with us. To provide drugs that are within the means of the myriad older patients dependent on long-term therapy, and thereby to avoid letting the pharmaceutical industry become a political football, is the great not avoid this urgent transposition of its concerns from the realms of technology to those of sociology problem of the immediate future. The industry can- and conscience.

REFILLABLE ITEMS

(*Continued from page 294*)

practicality, reliability and convenience of the method because of her natural aversion to mechanical systems. This means that a product must be foolproof before it is marketed. A mistake in this respect can lose a product more ground than a year's promotion can regain.

Some manufacturers feel that a plain refill container detracts from the beauty of the original product and lowers the dollar value of that original. This will be true, however, only when the refill can be used as is, without being placed in the original container.

For instance, one manufacturer made his refill so attractive that few people ever bought the original container—even once. Naturally this item has had little success as a refill, and no success as a full item: The dollar value of the original was completely ruined by the attractiveness and the low cost of the refill.

A refill sold only to be used with the original package is not critically appraised by the consumer from a packaging point of view. It's a refill and everyone knows it is. However, the refillable item that can be used by itself can do no good for the original product. The highest possible quality should be saved for the original container if the elegant image of the product is to be maintained.

(*Continued on page 365*)

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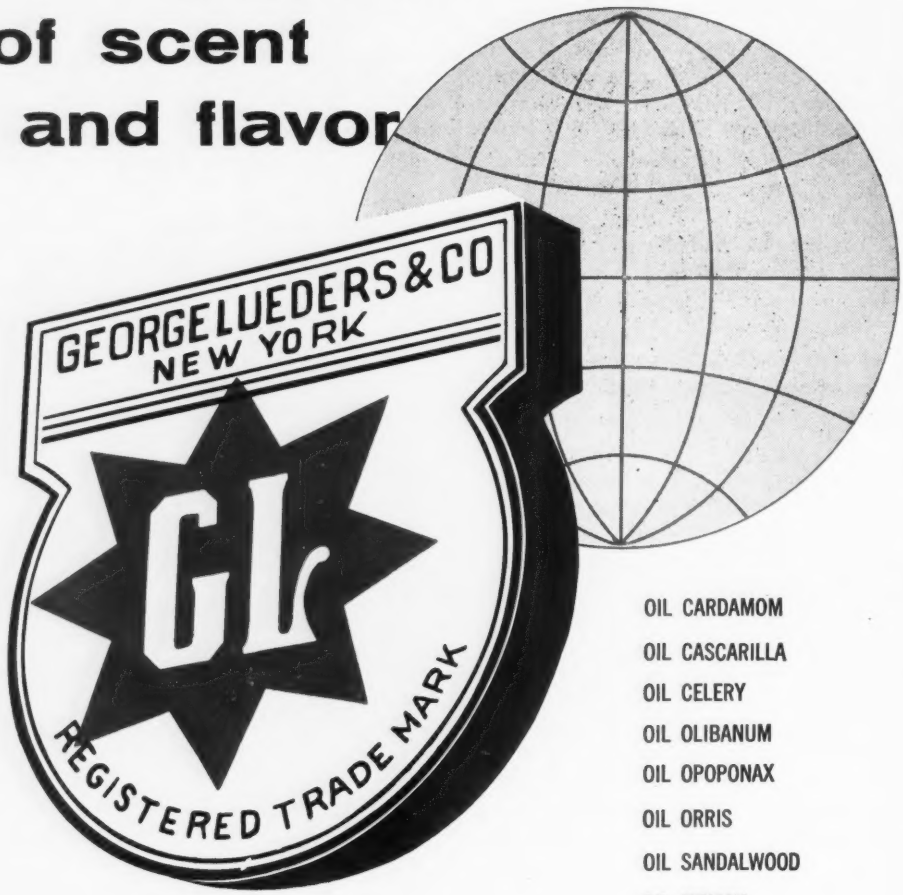

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Management Forum

BY FRANCIS CHILSON, Sc.D.
PROFESSIONAL ENGINEER

Revlon Roll-on

I was very much interested in a new television commercial for a new Revlon roll-on deodorant featuring the antibiotic, neomycin. My interest in this case is very personal because I tried more than ten years ago to get a patent on the use of antibiotics as deodorants. At that time the thought struck me that, since antibiotics are powerful bactericides, they must also be powerful deodorants, because the odor of perspiration is due to bacterial decomposition and oxidation. So, at a cost of several thousand dollars, I had a search made of the literature and the patents, and, while this was going on, I had a variety of samples of antibiotic deodorants made up for test purposes. I selected neomycin as the most likely candidate because it had already been released for over-the-counter sale and was stable in all sorts of media.

It is not necessary to describe the details of the testing period but the product was tested by several hundred women not only as an under-arm deodorant but also on sanitary napkins as well. (There were no aluminum salts in the test product; it was tested purely as a deodorant, not as an anti-perspirant.) The reports were universally favorable. I found that when used as an under-arm deodorant the product would kill all the skin flora in the contact area for five or six weeks, hence, the product could be used infrequently and still provide maximum protection from odor. Also it was found during these researches that under-arm odor in men came as frequently from decomposition of perspiration absorbed by their coats as it did from their bodies. But when men used the neomycin product it was absorbed by their coats and when the coats were moistened again by subsequent perspiration, no odor was detectable. During these initial tests no effort was made to include an anti-perspirant in the formula because of the obvious simplicity of this problem.

In the meantime, the searches revealed that of all the thousands of patents issued for antibiotic products none had been issued for a cosmetic product. All the millions spent upon research and all the work of thousands of research scientists had been concentrated upon the therapeutic use of antibiotics in man and animals. Talk about channelized thinking! I, an engineer, was apparently the first person to recognize that antibiotics might have other than therapeutic uses. What was found in the patent searches was also found in the literature. The billions of words written about antibiotics were at that time focused solely upon the therapeutic uses of antibiotics.

In spite of all this, I was unable to get a patent on the cosmetic use of antibiotics. I did not have a new composition of matter. All the combinations of antibiotics and bases I used had been anticipated—and patented—for specific therapeutic uses.

When I gave up trying to get a patent, I described my experience in a talk made before the scientific section of the then ADMA, warning the scientists of the dangers of channelized thinking and pointing out that antibiotics might have dozens of uses as yet not anticipated.

What most research scientists need apparently is a little more imagination.

At about the same time I published in this journal an epitome of my experience as a contribution to anyone who might be inspired to carry the research further. The reaction was curious. A number of cosmetic chemists, most of whom knew exactly nothing about antibiotic chemistry or pharmacology, expressed the fear that continued use of any antibiotic topically might somehow establish an antibiotic tolerance that would nullify internal effectiveness when constant users of antibiotic deodorants became ill and required internal antibiotic treatment. None of these intellectual giants offered to show how neomycin or any other antibiotic could pass through the skin into the blood stream. But in any case their reactions scared one of my big cosmetic clients away from using antibiotics in deodorant products, and, until

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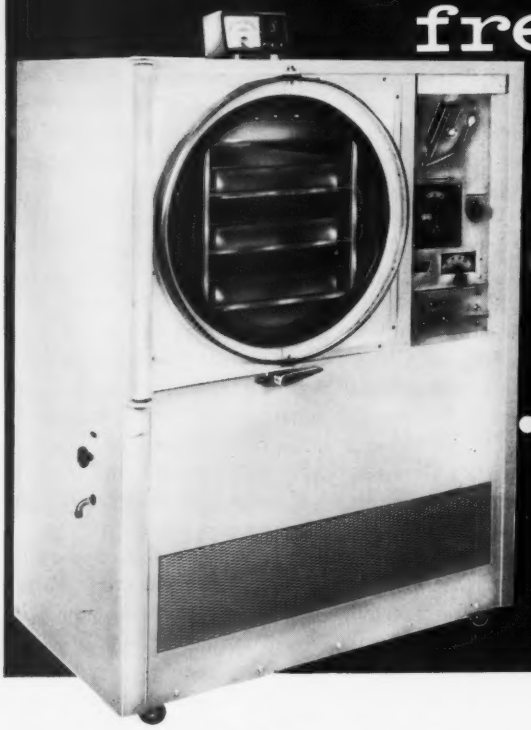

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15

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Gardiner, New York

Revlon took the idea up, apparently scared away all other cosmetic manufacturers.

Now that Revlon is commercializing an idea that I fathered, I naturally feel quite happy. Undoubtedly, as a gesture of gratitude, Charley Revson will make me a present of 1,000 shares of Revlon stock. But I won't sit on my hands waiting for it!

The Road Ahead

The increases in fringe benefits, especially pension plans, have imposed a road block on the progress of ambitious men. If a young chap decides to take a doctorate he must use up half his twenties doing the necessary academic work. Unless he is a genius he will not have made a start in the industry of his choice until he is well along in his thirties. By that time he will have been married, and this fact alone will reduce his job mobility. He will not change his job, even though he knows he is lost in a blind alley, without considering the effect of a lost pay check upon his family. That pay check will have become far more important to him than it was when he was single, because he very likely will be in hock for a house, a car, a television set, a refrigerator, and a washing machine. So, he becomes frustrated and resigns himself to unsatisfactory circumstances.

Presently his thirties are gone and he now is in his forties. If he is not definitely on the way to an important job when he hits the forties, the chances are that he will never get an important job at all. By that time our chap's kids are in school and expenses have gone up substantially, and he does not dare change his job. It is an unfortunate fact that the larger corporate enterprises do not employ men in their forties or fifties unless they are exceptional men or else day laborers. I think this practice is not only wasteful of sound talent but it is also stupid, because judgment ripens with experience, and native ability and intelligence are sharpened by that same experience.

As I have so often said before, I know many old men with keen imaginations and alert minds, and I also know many young men, even many with doctorates, that have neither imagination nor outstanding intelligence.

I have often wondered if the condition I have described here isn't the basic reason for the lack of loyalty to their companies that I encounter everywhere, particularly among younger executives. I am sure that the top management of this industry has no idea of the amount of dissatisfaction among lower eschelon executives, especially among technical personnel.

According to a recent survey by Opinion Research Corporation of Princeton, N. J., engineers and scientists are the most dissatisfied group in industry. Oddly enough, the study showed that many things beside money were elements in the general dissatisfaction. One company with the highest number of well-educated and highly paid professionals also had the most dissatisfaction among them. Sixty-seven per cent of the engineers and scientists surveyed thought that getting ahead in management was based more on politics than ability and knowledge.

The study showed, I think, a woeful lack of mutual communication between management and technical personnel, and, when you consider that the scientific and engineering group in industry is increasing at a rate eight times faster than the labor force as a whole, this lack of communication poses a serious problem for management. Technical persons don't like being taken for granted; they want recognition and appreciation and status as professionals; they want to feel that there are no barriers to advancement into the upper management area.

Fear

"There's nothing to fear but fear itself." Nothing but:—

Communism in general; recalcitrant Russia and malevolent China; Laos, Cuba, the national debt, the A and the H bomb; Kefauver, Hoffa, cancer, air and water pollution, unemployment, depletion of water and soil resources; the Congo, the decline in moral standards, the decline in educational standards and the waste of talented young brains; taxes, heart disease, the decline in productivity and the indifference of our working forces; the unions, juvenile delinquency, the delay in rocket and missle development; the brass brains in the Pentagon, and the population explosion.

It's comforting to realize we can't have any more troubles; we've got 'em all now. It is also comforting to learn from history that this world has been going to Hell for one reason or another for the last 2,000 years. Ain't we got fun!

Automation

It is one of the paradoxes of automation that, while automation has increased production, it has not decreased prices. It is the common practice to blame increased prices on increased labor costs, but this belief is found, on analysis, to be without foundation, because the labor cost of consumer products from automobiles to bottles of pills is small. I think increased prices are due to the inflationary pressure of increased taxes and also to wasteful advertising and marketing practices. In regard to the latter, we have not tried to apply automation to marketing and advertising, but it is a fact that from 40 to 50 per cent of sales income in the drug and cosmetic industries is spent on various phases of marketing. And that is too damned much! Many administrators take the position that the government pays half the marketing bill, for, if the money were not spent, the government would collect that much more in taxes. The fallacy in this is that the government would collect only half the savings and that this could be over-

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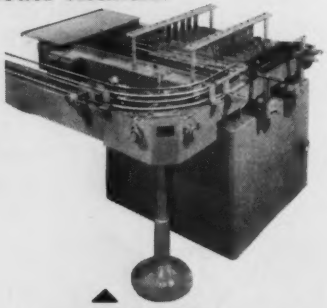

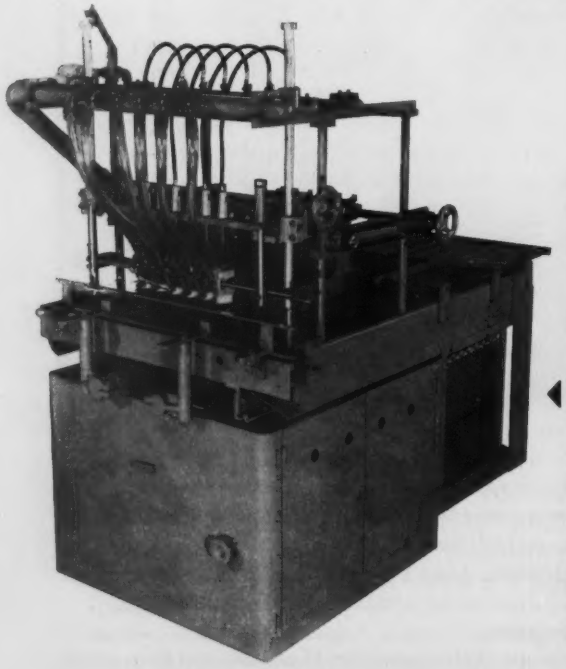

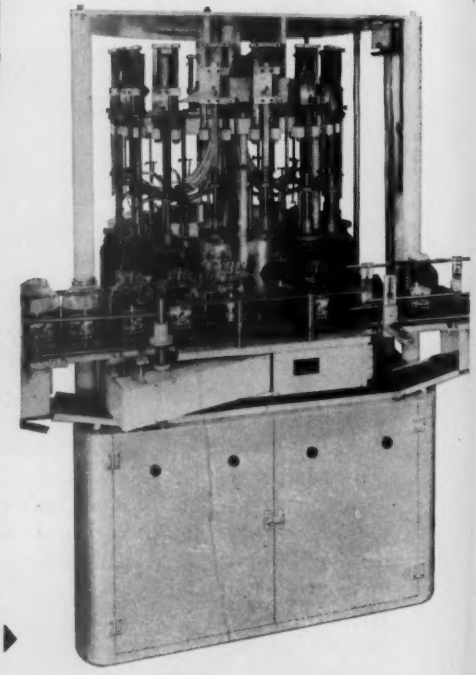

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Feeds and cleans in one operation. A combination air blast and vacuum exhaust removes foreign particles in the containers. Conventional or odd shaped packages are fed and cleaned safely at speeds you require. MS Feeder-Cleaners allow both operations to be done on one machine . . . save labor, time and money.

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Automatically fill glass and metal containers . . . including aerosols. MS Rotary Fillers handle all free flowing and semiviscous liquids without drip or spill. Quick easy changeover between container sizes . . . positive fill heights . . . 1 ounce to 1 gallon capacity . . . safe container handling.

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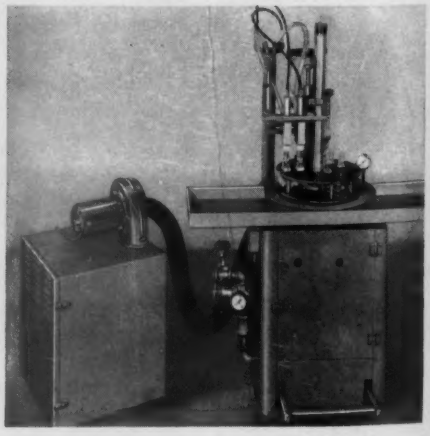
Moderate filling requirements are easily met with MS Portable Vacuum Fillers. Able to fill a wide range of container sizes with any liquid or semi-liquid the portable machine satisfies short run or test market packagers. A blower unit is available as an attachment for cleaning the containers.



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come by reducing prices.

With regard to government expenditures, business men have made no effort to exert strong, continuous pressure on the government to demonstrate how government expenditures can be reduced and made more productive. Every very large organization whether of government or industry is ipso facto inefficient, because it simply is not possible to make vast numbers of people work effectively, and it is not possible to spend vast sums of money without waste. Big industry does a far better job in this area than the government. I know that politicians create useless jobs and cause useless expenditures. I know that the veterans' and the farmers' lobbies rob the government shamelessly. And industry stands for this thievery and does nothing to stop it. Billions of dollars are spent developing military equipment, a good part of which is obsolete by the time it is built. But too many industrialists take the position that taxes are, like death, inevitable and nothing can be done about it. There is no doubt that the government could provide all necessary services and military defenses for three quarters of what it is spending now.

But who cares?

Emotion in Management

For many years it has been the custom of writers and speakers on the subject of administration and management to decry emotion in making decisions and executing them. I think this attitude is ridiculous, because there is no such thing as an intellectual process uninfluenced by the emotions, excepting possibly mathematics or physics, and I am not sure that even these specific studies can be excepted, because the curiosity, the inspiration, the devotion, the dedication, and the intellectual excitement that cause men to spend their lives in such studies are surely to some extent emotional in character.

When a salesmanager whips his team into a fine frenzy to increase sales, he may think he is appealing to his men's intellectual capacities, but he isn't. Nor is the plant manager, applying pressure to a cost reduction program, appealing wholly to the intellectual powers of his subordinates.

When Churchill made his famous fighting speech after the fall of France when England stood alone, he was not appealing to the intellects of his people; he was appealing to their emotions—to the forces that control and stimulate their intellects. He was fighting the mightiest military force the world had ever seen with *words*. At that moment, that's all he had to fight with. At the same time he was using the same words to inspire his people to stand invincible together; to endure any sacrifice; to work harder; to suffer blood and tears and toil and sweat. When he used these symbolic words in his own way, he was appealing directly to the emotions of his own people, not to their intellects. Lincoln at Gettysburg, uttering the few simple words that forever will re-echo down the corridors of time, was not appealing to the intellects of his people.

History is replete with thousands of instances in which appeals to emotions produced intellectual results that served specific purposes good or bad. Industrial history is filled with instances of emotional leadership. I think it can safely be said that no effective leadership is possible without an emotional basis.

Therefore, why be ashamed of emotion? Why pretend that we arrive at conclusions and make decisions as unemotionally as a mathematician arrives at the sum of six digits? We all know that if we like our bosses we'll do more for them than if we hate them. In either case our reactions are emotional.

What is needed in administration and management is *controlled* emotion. We all have prejudices (and prejudices are emotional), and we must constantly be on guard lest our prejudices affect our decisions and directives. But it is utter nonsense to assume that the thinking behind these decisions and directives is entirely uninfluenced by emotional elements. It is important to realize this when dealing with superior officers or directors. It is one of the purposes of what I have previously called "reciprocal management" to make certain that material and information submitted to top management for decisions and directives be presented in such a way as to stimulate desirable emotions and avoid stirring up undesirable ones.

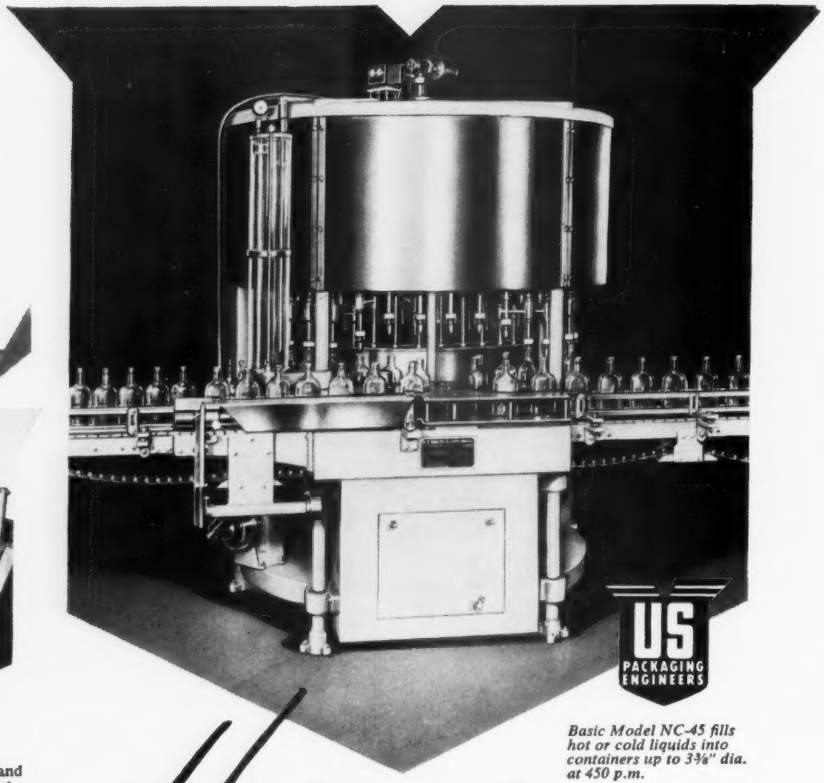
Education for Life and Industry

In a recent article published by *The Saturday Review*, Andre Maurois compared French and American educational methods: (Italics mine.)

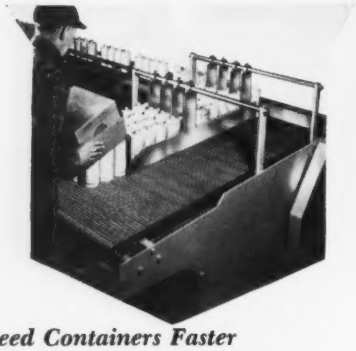
"*Technical power without moral power is dangerous.* According to his philosophy—or his faith—man can use or misuse the new forces modern science places at his disposal. In times as difficult as ours men should be made worthy of their increased strength. A modern country needs: a) skilled workers able to apply the new techniques; b) research workers able to improve them; c) philosophers able to teach how to ally efficiency and wisdom. America produces, better perhaps than we [in France] do, the first two types. Maybe she doesn't attach enough social importance to the third type.

. . "Because we lack technicians we may be tempted to sacrifice humanities to technical education, *but we must remember that no technician will be an efficient leader of men if he has no general culture.* Robert Hutchins gave this example, which I could match in France: 'When the California State Board of Education, desirous of meeting the needs of the Aircraft Industry, asked the industry to recommend specific courses, one manufacturer replied that he wanted students who had more mathematics, history, literature, and English composition.' I agree with that manufacturer. If a student knows how to think and how to work, has a good command of language and

U. S. Rotary Vacuum Filler



Basic Model NC-45 fills hot or cold liquids into containers up to 3⅜" dia. at 450 p.m.



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Most Versatile Multiple Filler

MODEL B-49 STRAIGHTLINE VACUUM FILLER. For liquids and semi-liquids. Fills 4 to 9 containers simultaneously. Lever engages and disengages filling stems, otherwise operation is automatic. Adjustable for all container heights up to 14", miniature and standard bottle finishes, gallon F-style cans, wide mouth jars. Stainless steel; plastic available. Discharge conveyor is optional. Write for "Bulletin B-49."

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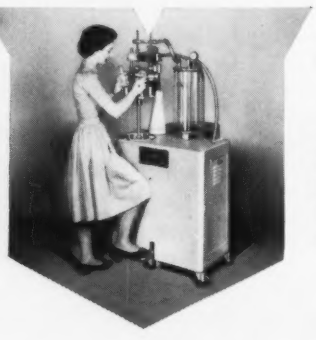
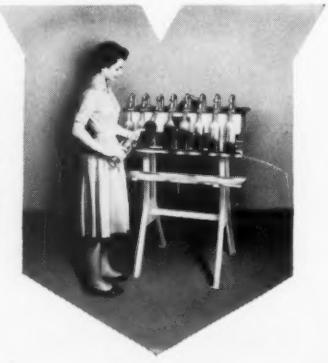


Continuous Filling

MODEL B-2 VACUUM FILLER. Fills 2 containers while 2 filled containers are being removed and 2 empties loaded. Handles containers up to 4¼" dia. up to 13" high. Stainless steel construction. Plastic available. Will fill directly from drum or supply container on the floor. Portable. For details, request "Bulletin B-2".



For All Liquids All Containers

Also for foamy products that do not permit agitation. Stainless steel filling tubes. Fill controlled automatically. Float regulates product supply in glass lined tank. No power is required. Write for the "Siphon Bulletin".

has grasped the foundation of mathematics, then he will easily learn any new technique."

And C. P. Snow, in his usual cogent manner, had this to say about the final application of two different types of education:

"A scientist has to think of one thing, deeply and obsessively for a long time. An administrator has to think of a great many things, widely, in their interconnections, for a short time."

Want a New Product?

My good friend Bob Wilson, president of the Tec Chemical Division of the Reheis Company, received the following letter from the president of the Haitian Banking Society for Economic Development, and Bob passed it along to me so that I could bring the product referred to in the letter to the attention of my research-minded readers:

The Chemical Corp.,
Pacific Street,
Stamford, Connecticut.
Dear Sirs:

We wish to inform that we are at present establishing an Investment Bank with a view to developing natural resources of Haiti. We have already financed some enterprises in the agricultural and industrial field.

In the agricultural field, we happened to contact a few natives in the remotest parts of the country. And after long negotiations with them, we were given the secret of eternal sexual power. That brought us to understand why many of the old men around had very young children. We acquired this secret at very high cost and we are now glad to put on the market a product that was, up to now, prepared by handicraftsmen on a small scale for the use of a few initiates.

We have, therefore, processed it into a tasty liquor sweetened with sugar. The effects of this drink are a great increase in sexual power for young men, a revival of the lost power for impotence in old men, and a new strength for depressed people.

The liquor is natural, unharmful and extremely efficient. Men as well as women, can use it where sexual life is weakening. In short, this drink gives new energy where sexual power has disappeared since a long time. The only danger is that great care should be taken not to drink too much, as the result might well exceed expectations.

The product is not a drug. To stop using it would not do any harm or result in adverse effects. If the old man cuts it down entirely for one reason or another, he is just back to his starting point, i.e. senility. As for the young man who does not drink it anymore, his former sexual status resumes its course without any discomfort to him.

The product has been in use since some 150 years by natives and never caused any inconveniency to anyone. On the contrary, a feeling of general welfare is experienced through a purifying process of the drink in the body. The effects start within a delay from one to twenty-four hours after drink.

We assume that you will realize the importance of this discovery. We would like to know if you are interested. We can deliver this drink in 10-oz. bottles at $18.50 a bottle. Sample of one bottle may be sent against your check . . . ."

(Note: I hope that none of you old bucks gets too excited about this discovery. Excitement is bad for your lumbago.)

Switzerland

When I was in Switzerland recently, I ran across a clever means of reducing the amount of space required for finished stock shelving. This system, known as the Compactus System, virtually eliminates aisles between rows of shelving. Beneath the rows of shelving a power-operated cable is let into the floor. At the end of each row of shelves there is a lever that actuates a mechanical clamp mounted below the lowest shelf and so designed that when the lever is pulled the clamp engages the cable and the shelves roll apart. The shelves of course are mounted on rollers.

The unit I saw in Geigy's plant had shelving units about 15 feet long and 8 feet high. The units have safety features, so there is no danger of getting squeezed between the shelf units. These units are very neat and were made of heavy plywood. Cosmetic and drug manufacturers would find them particularly useful for holding small items of finished stock, labels, and packaging material. The unit I saw was about 40 feet long, and the individual shelf units were about 18 inches deep. The shelf units cannot get out of line. Compactus is made by Ing. Ingold, Zurich, Switzerland. I saw a system somewhat like this several years ago. The shelving units were suspended from monorail tracks, but the idea of eliminating aisles by pushing the shelving together was the same.

Granulate Quick-Drier and a Strip-Packager

A drier with drying time of 20 to 30 minutes for all granular products has been developed.

Also introduced is the new Uhlmann inexpensive strip-packager that features quick, easy change-over for size and shape of product to be packaged. It can seal up to 6000 units per hour in heat-sealable cellophane, thermoplastically-coated paper, or aluminum foil. *Chemical & Pharmaceutical Industry Company, Inc., 90 West Broadway, N. Y. C.*

Nonmetallic Filter

A Submicron Filter designed to sterilize and clarify pharmaceutical products that are heat-sensitive and are also sensitive to contact with any type of metal. Sterilization is affected by filtration through a Millipore MF membrane. *Barnstead Still and Steri-*

NOW! LARGE TABLETS AT HIGH SPEED

Up to 5/8" diameter tablets at 3800 TPM

Here's the press that's designed to take larger tablets and deeper fills at high speed in perfect stride. The new Stokes Model 541 4-ton press produces tablets up to 5/8" diameter with depths of fill from 1/8" to 11/16". Production speeds for this 41 station press range as high as *3800 tablets per minute.*

This versatile press offers all the operating features needed for uniform high-quality production of a wide variety of tablet sizes and shapes. New dual-pressure distribution system ensures uniform compacting at high production speeds. Simple press adjustments permit the production of thin wafers, intricate shapes, and other special tablets.

The Model 541 press is typical of the many new designs initiated by Stokes to meet the ever-changing needs of the pharmaceutical industry. For more than 60 years, Stokes has been anticipating these needs . . . *and filling them* . . . with quality equipment of proven performance. Today, many leading manufacturers rely on Stokes' tabletting experience and laboratory facilities in the development of optimum tablet sizes, weights, and formulations for efficient, high-speed production.

Get a head start on production by investing in a *new* Stokes press. For complete technical data on the Model 541 and other high-speed presses, contact the Stokes representative nearest you. Be sure to ask about the *new Force-Flo Feeder* option which makes it possible to go from dry-blended powder to finished tablets in a single operation.

Pharmaceutical Equipment Division **STOKES**

F. J. STOKES CORPORATION, 5500 Tabor Road, Philadelphia 20, Pa.

STOKES INTERNATIONAL: PHILADELPHIA • TORONTO • LONDON

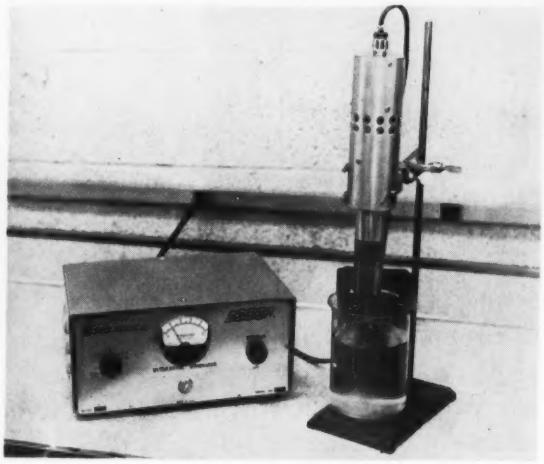
lizer Company, 177 Lanesville Terrace, Boston 31, Massachusetts.

Indicator Valve

An Indicator Valve has been developed with the degree of orifice opening always accurately indicated. The valve opreating threads are completely outside the valve and never touch the often corrosive flowing medium. *Flow Systems, Inc., 413 Poinsettia Street, Box 444, Corona Del Mar, Calif.*

Ultrasonic Emulsifier

Branson has introduced a new, compact ultrasonic emulsifier, S-75 Sonifier. It offers rapid emulsifying and dispersing, reduction in the amounts of emul-



sifier needed for a particular application, and ex-extremely minute particle size. *Branson Instruments, Inc., 40 Brown House Road, Stamford, Conn.*

Nauta Mixer

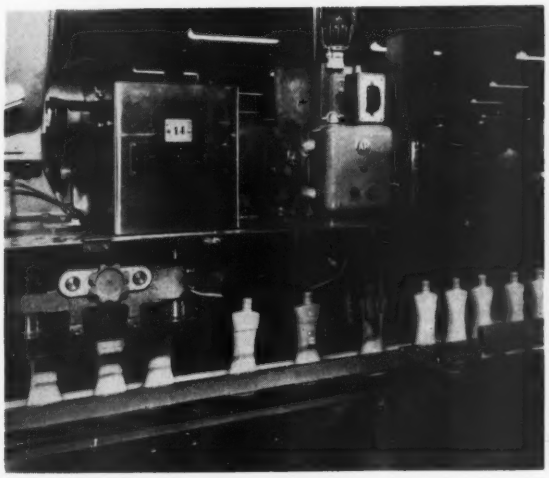
A mixer for compounding experimental agriculture herbicides, pesticides, and Upjohn's agricultural antibiotic "Acti-dione" has batch sizes ranging from 40 to 400 pounds and can be mixed daily with no reduction in mix tolerances. *J. H. Day Company, 4932 Beech Street, Cincinnati 12, Ohio.*

Vari-Visco Filler

A Vari-Visco Filler, which is capable of filling more than 300 containers per minute. A worm timer on a floating mounting, besides large feed and discharge wheels, provides extra smooth container handling. Elevating stainless steel trays give "bottom up" filling. The center column drive is equipped with a safety detenet operating a limit switch in the motor control circuit, which also makes for easy adaptation to synchronized drive arrangements. A magnetic clutch in the pump drive permits operation of the machine without driving the pumps. *Karl Kiefer Machine Company, Cincinnati 2, Ohio.*

Restriction Plug Inserter

Resina has replaced a wholly manual operation with the Model PB Restriction Plug Inserter. A hopper feeds plugs down a chute that has a restraining arm at the end. The arm holds a plug in position to



be picked up by a filled conveyor-carried container. A moving pressure belt positioned at the correct height tamps the restriction plug into the container mouth. *Resina Automatic Machinery Company, Inc., 572 Smith Street, Brooklyn 31, N. Y.*

Ultra Sonic Sealer

A sealer, Zephyr 300, which fuses materials that have resisted or been ineffectively welded by standard processes, including many plastics and synthetic woven fabrics has been developed. It features low power consumption, can cut or seal, and makes butt lap, seam, spot or continuous welds. The sealer will not burn the plastic if the flow of material is interrupted. When movement is resumed, there is no distortion at the point where the run was stopped. It cleans as it seals. Operating on ultrasonic impulses, it moves at the rate of 20,000 vibrations per second, welding plastics by releasing kinetic energy within the material joined. Materials can range from one-quarter to 100 mils., and sealing speeds of 100 linear feet per minute are possible. *Ultra Sonic Seal, Inc., Division of Kleer-Vu Industries, Inc., N. Y. C. 16.*

Can and Bottle Crusher

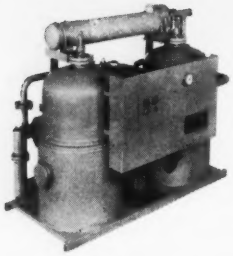
Rescor has developed a can and bottle crusher that will crush any size bottle, can, vial, ampul or aerosol can in seconds, solving the problem of reject disposal. *Rescor Industries, Mount Vernon, N. Y.*

Dry-Air Sterilizers

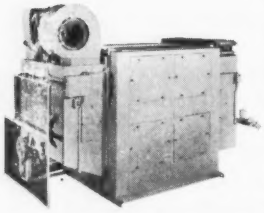
A new series of sterilizers is available from Blue M for precise sterilization and conditioning of Vaseline, oil, talcum, glassware, instruments and similar items. *Blue M Electric Company, 138th and Chatham Street, Blue Island, Ill.*

Stories with happy endings to moisture problems...

DRUGS PACKAGED IN DRY CABINET
DRY INSTRUMENT AIR KEEPS OPERATING LINE CLOCKWORK
DRY ATMOSPHERE MAINTAINED FOR PHARMACEUTICAL PRODUCTION
DRY SILICAR FLOWS SMOOTHLY IN CANDY PLANT
CENTRAL DRYER SUPPLIES INSTRUMENT AIR AT REFINERY



Type BZ—Dual-adsorber, pressure-reactivated unit. Fully automatic. Designed for drying compressed air for instrument line service and for many other applications.

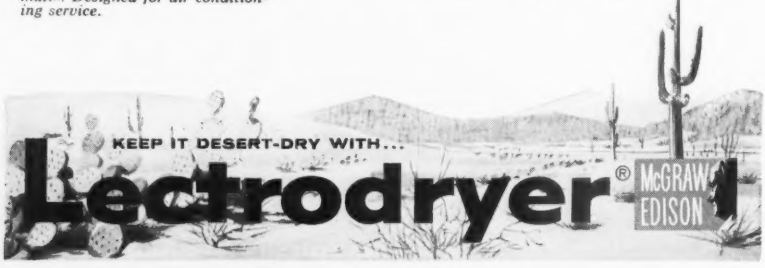


Type CH—Multi-adsorber, heated-air-reactivated unit. Fully automatic. Designed for air conditioning service.

These engineering reports on problems solved by Lectrodryers may contain the answer to your troubles with unwanted moisture. The plot's the same in each—with moisture serving as the villain in clogging instrument air lines, interfering with packaging of drugs, speeding up corrosion, or committing other costly crimes.

Lectrodryers solved these problems. Air, dried to a very low dewpoint now keeps operations on the straight and narrow path, or protects equipment and stocks. Each case history cites difficulties encountered, names conditions and describes the equipment that solved it.

For copies of these reports, or for other drying help, write Pittsburgh Lectrodryer Division, McGraw-Edison Company, 309 32nd Street, Pittsburgh 30, Pennsylvania.



Wheeled Rails

M-H has two different types of wheeled rails that can be used to make live storage racks, pallet conveyors, work table feeds, and in other applications. Versarail, has a tubular rail design with wheels mounted on both sides or on only one side. Palletflo Wheel Rail is a heavy-duty rail designed primarily for handling heavy pallet loads. *M-H Standard Corporation, Jersey City, N. J.*

Hopper Units

Available for Creamery's No. 4 and No. 6 top feed rotary pumps, the new hopper units are said to be ideal for use with top-feed pumps for holding or receiving all products. They have independent suspension, and eliminate distortion and misalignment damage through downward pressure. *Creamery Package Mfg. Company, 1243 W. Washington Blvd., Chicago 7, Ill.*

Rectangular sterilizer

Of major significance on Power Clave, a new rectangular sterilizer, is the Wilmot sterilizer's electrically-operated door that eliminates hand wheels and locking bars. *Wilmot Castel Company, 1949 East Henrietta Road, Rochester, New York.*

High-Speed Mixer

Artofex VT-40, a new mixer, is designed for mixing heavy or light powders, granules, creams, liquids or extremely heavy materials of paste consistency. All materials being processed are brought into the complete mixing action. *Excelsior Industrial Corporation, 130 Broad Avenue, Fairview, N. J.*

Die Feeder

Colton has introduced a new feeder designed for raising production rates and improving quality of tablets having a diameter of up to two inches. The Model 275, with undertable drive and easily removeable triple feed frame, fits on the company Model 270 rotary tablet press. It has a one-piece feed frame with three agitators that are designed to force-feed the dies and assure maximum die fill. A stainless steel hopper is mounted on top of the feed frame unit. *Arthur Colton Company, 3400 E. Lafayette, Detroit 7, Mich.*

Three-Roll Mills

New high-speed three-roll mills with simplified one-point hydraulic adjustment for uniformity of production and greater output are available in sizes from 4½ x 10 to 16 x 40 inches. *Charles Ross & Son Company, Inc., 148 Classon Avenue, Brooklyn 5, N. Y.*

Portable Filler

This dual syringe, heavy-duty stainless steel portable filler has independent control of each syringe so that two liquids of different composition and quantity may be filled into the same container at the same time. The liquids are not blended until they are in the container. *Chase Equipment Company, 633 Bergen Street, Brooklyn 38, N. Y.*

Bottom-Coder

H. Gottscho's Sideline Markcoder No. 3 is a conveyor attachment for coding the bottoms of large containers. It is intended for containers as tall as 10 inches with diameters to five inches. *Adolph Gottscho, Inc., Hillside 5, N. J.*

Sanitary Pumps

These No. 6 heavy-duty rotary sanitary pumps are said to be ideal where long discharge lines are encountered and where viscous or liquid products create high head pressures. *Creamery Package Mfg. Company, 1243 W. Washington Blvd., Chi. 7, Ill.*

Automatic Numbering

A device for automatic consecutive numbering of boxes and shipping cases as they travel along a conveyor or through a case sealer can be used on boxes as small as 4 inches long by 6⅛ inches high, with no limit on maximum size. *Adolph Gottscho, Inc., Hillside 5, N. J.*

Vacuum/Pressure Temperature Chamber

A vacuum pressure temperature chamber especially for the testing and calibrating of pressure sensing and indicating instruments has been designed. The Model ASU-40-3-HC provides a pressure range of 20 to 32-inch mercury absolute, over a temperature variance from −40° F. to +200° F. *Cincinnati Sub Zero Products, 3932 Reading Road, Cincinnati 29, Ohio.*

Rotary Filler

A new rotary filler, Model PR-A, features an all-around conveyor, positive cam action and only one star wheel. *Packer Machinery Corporation, 109—14th Street, Brooklyn, N. Y.*

New Pump

Corley has developed a new high-head high-capacity canned pump that delivers up to 100 gpm at heads up to 92 feet. It is available in cast iron or 316 stainless steel, and handles temperatures up to 500° F. The rotor-impeller, the only moving part, is directly driven magnetically like an electric motor. It is said to be ideal for pumping such fluids as water, solvents, hydrocarbons, coolants, chemicals, radioactive fluids, and drug products. *Corley Company, Inc., 685 Myrtle Avenue, Boonton, N. J.*

Clutch Attachment

A clutch attachment that adapts to any of its Filamatic Portable Fillers for automatic conveyor line operation is offered. *National Instrument Company, 2701 Rockwood Avenue, Baltimore 15, Md.*

COLORLESSNESS *begins with Emery Oleic Acids*

To obtain a light color in any product, it is easier to start with white or colorless basic ingredients. It's costly and often impossible to remove color later. Emery gives you the colorless raw materials you need. — Emersol® 233 LL Oleic Acid and Emersol 221 Low Titer White Oleic Acid.

When you start with colorlessness, you can add as little or as much color as you wish. And the remarkable color stability of Emersol Oleic Acids, as assured by product specifications, minimizes color changes during processing and throughout shelf life. If the oleic acid you are now using cannot meet these specifications, why not let us send you samples that can, time after time? It costs you no more for this extra quality.

Write Dept. D9 for samples or 20 page comprehensive booklet "Oleic Acid Emeryfacts."

COLOR SPECIFICATIONS	Maximum Color		Maximum Color Stability	
	Photo. Index	Lovibond 5¼" (Y/R)	Photo. Index	Lovibond 5¼" (Y/R)
Emersol 233 LL Oleic Acid	11/0.5	3/0.5	32/4.5	10/3
Emersol 221 Low Titer White Oleic Acid	15/0.5	5.0/0.5	51/10.5	20/7

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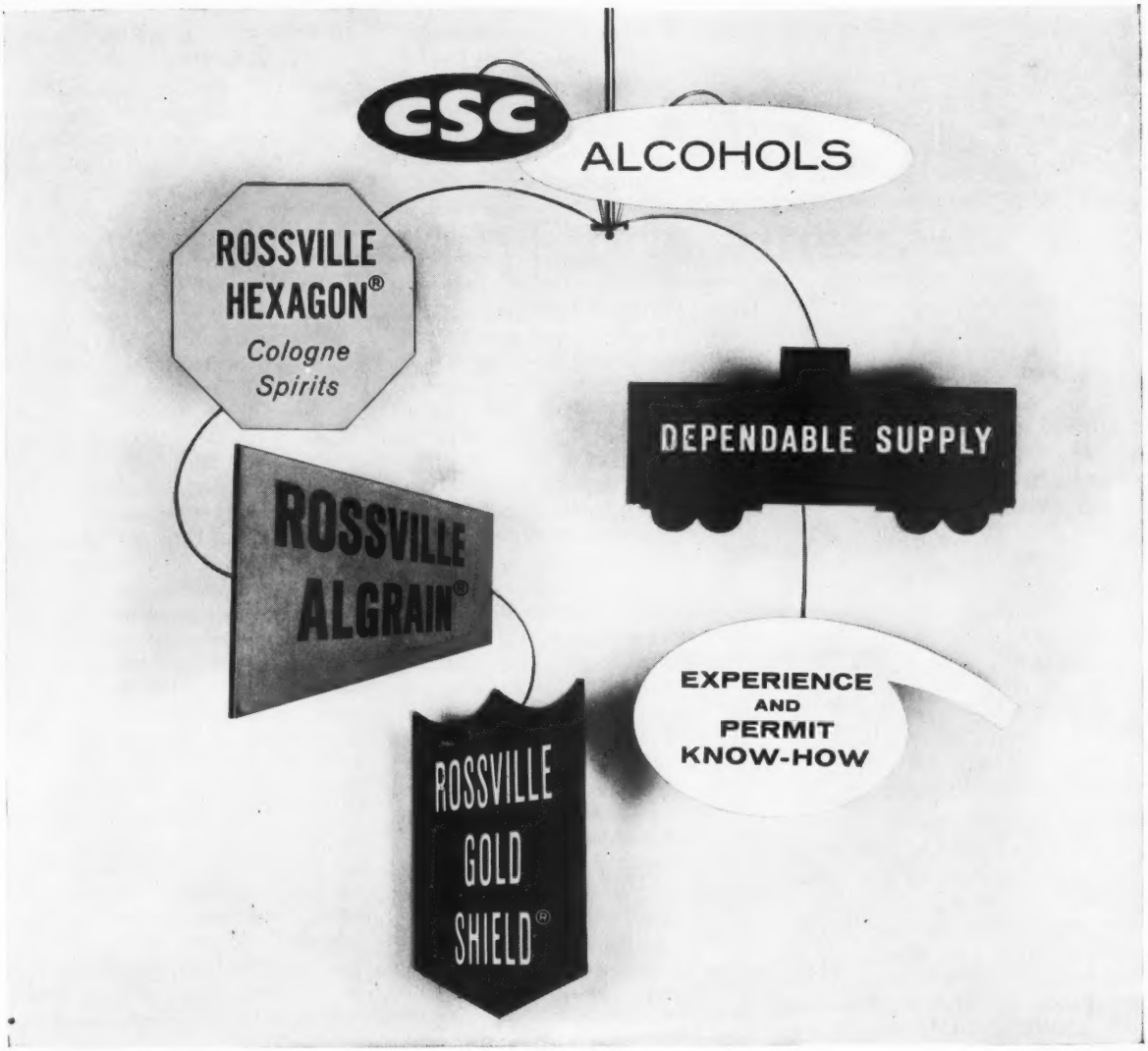

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Rossville Hexagon® Cologne Spirits are specially fractionated grain spirits, unsurpassed in purity and clarity, free from foreign odors. Available for the *finest* perfumes, colognes and toilet waters at 190 proof, pure or specially denatured. Enduring fidelity of taste and odor assures long shelf life of final product.

Rossville Algrain® Alcohol is a highly refined grain alcohol meeting the most rigid purity standards. Free from foreign odor and flavor. For medicines, perfumes, toilet waters, flavoring extracts. 190 proof, pure or specially denatured.

Rossville Gold Shield® Alcohol has uniformly high purity, is free from foreign odor and flavor. For pharmaceutical and cosmetic use. 190 or 200 proof, pure or specially denatured.

CSC also supplies more than 50 authorized specially denatured alcohol formulations and the proprietary solvents, Shellacol®, Quakersol® and Quixol®, as well as Fotocol®, a special industrial solvent.

Only CSC can offer you this unique combination of quality, quantity and choice. Take advantage of CSC service, coast-to-coast. Write for individual data sheets to Commercial Solvents Corporation, Industrial Chemicals Dept., 260 Madison Avenue, New York 16, N. Y.

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Patents and Trademarks

BY THOMAS CIFELLI, JR., PATENT ATTORNEY*

The 14th Year of the Lanham Trademark Act of 1946

To those concerned with the adoption, use and protection of trademarks in this country, the Lanham Act needs no explanation. This is the organic federal law applying comprehensively to trademarks. Although the law was passed in 1946, it did not become effective until 1947. Hence, the act has been in effect 14 years, as of July, 1961.

Although there has been no new federal legislation and the courts and the Patent Office have followed recent trends during the past year, a number of cases of general interest to readers of this journal have occurred during that period; these will be highlighted here. In addition, practically all of the reported cases dealing with the question of whether mark A is or is not likely to confuse the public in view of the prior registration of mark B will be mentioned. Such cases not only should be of use to those charged with the job of coining trademarks—obviously, one does not knowingly coin a trademark that is likely to cause confusion with a prior one, but they should also give owners of trademarks, whether registered or not, an idea of the relative strength of their marks.

As in the past, the author is indebted to Dr. Walter J. Derenberg, Professor of Law, New York University, for his all-inclusive review of developments in this field. The present article makes very liberal use of Dr. Derenberg's last annual report covering the 14th year, which report was just released, at the time of this writing.

*Richards and Cifelli, Newark 2, New Jersey

1. Slogans and Combinations of Words. Two decisions in which owners of slogan trademarks were protected were recently rendered. In one, the well-known slogan, "Where there's life . . . there's BUD," was ruled to have been infringed by the language "Where there's life . . . there's bugs." The slogan SCOOP OF THE MONTH for ice cream was ruled by the Patent Office Appeal Board to be an original term with a certain double entendre making it eligible for registration at least on the Supplemental Register.

Also, although the Patent Office Examiner had refused to register the slogan, "The Test is in the Touch," for knitted underwear, outerwear and hosiery, on the ground that it was mere trade puffery, the Patent Office Trademark Appeal Board (TAB) overruled the Examiner, ruling that the slogan possesses a certain degree of originality. The present liberality of the TAB was also shown in a case involving the slogan, "The Standard Packing of the World."

2. Style, Model and Grade Designations. The word BURGUNDY for use on a soft drink syrup was ruled to have significance only as a flavor designation used by applicant only for the purpose of identifying the principal ingredient of cherry syrup, in a 3 to 2 decision of the authoritative U. S. Court of Customs and Patent Appeals (CCPA).

3. Ornamentation. It appears from the cases, that trademarks consisting of ornamentation, that is, designs without words, are now receiving a better reception as regards their registrability. The CCPA ruled that the Simmons Company's design of a series of horizontally spaced pairs of vertical rows of stitches on the outer vertical face of mattresses was subject to registration on the Supplemental Register. This Court also authorized registration on the same Register of the entire background arrangement of certain paper products such as checks, passports, etc. The trademark was a repeating pattern of green parallel lines with overlapping offset portions.

Another case indicating a more liberal approach in this area involved the Hehr Manufacturing Company's square red label which was ruled to have acquired a secondary meaning and to be inherently distinctive.

4. Design and Conformation. Since the Patent Office permitted the recent registration of the Haig & Haig "pinch bottle," a number of applications seeking to register the conformation of bottles or containers, as well as outward features of the articles themselves, have been filed, with mixed results. The CCPA refused to permit the registration of the TABASCO bottle, ruling that the pepper sauce bottle was nondistinctive without the identifying label. The same result was reached by the TAB in an application of Johnson & Johnson to register the container for a liquid glue without the applicator cap used in conjunction with the container. The TAB felt that there was nothing inherently distinctive about the shape of the container and noted that, although the glue had been used for more than 20 years and more than 100,000,000

units had been sold in that period, there was no showing that the container as such without the accompanying trademark LE PAGE's had acquired any separate or independent significance.

5. *Mere Informational or Promotional Material.* If a mark is considered as not indicating origin but as being merely in the nature of an informational statement, it cannot be registered. The term CHECK SPOT for a temperature indicator for frozen foods was considered by the TAB to have trademark significance despite the fact that it was to a certain extent informational. However, LUCKY 7 CLUB for indicia cards for use in shoe repair shops was refused registration by the TAB, as being merely part of a promotional scheme. It appears that the manufacturer furnished a supply of cards bearing this designation and the customer's name to the purchasers of machinery who, in turn, made the cards available to their customers offering one free pair of new heels when a total of six pairs had been obtained at the regular prices.

6. *Merely Descriptive Marks.* The term TWIST-OFF for closure caps for containers was ruled registrable by the TAB in view of the very substantial use of the term and the secondary meaning which had been established. The TAB also overruled the Patent Examiner and held that the trademark KITTY LITTER for ground clay used for litters for small animals was registrable, despite its descriptive connotation. The Board was impressed by the usage of the mark for a period of at least 12 years and by the wide advertising of the mark during that time. A similar result was reached by the Board in respect to IRISHEEN for men's and boys' wear and apparel. The Examiner had taken the position that the term identified the fabric rather than the finished item. However the Board, on appeal, felt that despite the use of the word "sheen" the mark would not by its nature indicate a fabric to the general public. The words BEAUTY NET for hair spray were also ruled by the TAB not to be descriptive. However, registration was refused because of a prior registration of BEAUTY SET for a hair conditioning cream and a hair color rinse.

However, the TAB did refuse registration of a number of marks on the ground of descriptiveness in the following cases:

JAPAN FOLK CRAFT as applied to Japanese imported pottery items; JET IGNITION as applied to a stoker incorporating a jet to ignite fuel; COLORPRINT as applied to maps and atlases printed in color; the term BRIEFHAND for textbooks and printed lessons was held to constitute merely the name of a system of shorthand and, as such, incapable of trademark registration; and in In re Reseska, the Board affirmed rejection of several applications for registration of the alleged trademark RAINBOW in a rectangular design of various colors for colored cigarette paper. In this instance the refusal was based on the ground that the representation of the colored rectangular design was nothing but a representation of applicant's product itself, i.e., cigarette paper, and therefore did not function as a trademark.

7. *Likelihood of Confusion in Ex parte Cases.* These are cases involving only one party and arise by refusal of the Patent Examiner to pass a trademark application for publication. The issue of likelihood of confusion is the issue which pops up most often in trademark proceedings.

The TAB found likelihood of confusion between the mark sought to be protected and a prior registration in cases involving the following marks as taken from Dr. Derenberg's report:

". . . the letter 'K' for motion picture cameras and projectors and the registered marks K and design for films and plates, etc. and K-COLOR for sensitized photographic film (it was held to be immaterial that applicant used its mark only in association with the principal trademark KEYSTONE); PROPOMEEN for condensation products of propylene oxide with aliphatic amines and the registered mark PROMEEN, for primary, secondary, tertiary, and quaternary amines, both used as emulsifying and wetting agents; WHITE HOUSE for flower bulbs and the registered mark WHITE HOUSE for grass seed (a letter of consent from the prior registrant was disregarded in view of the identity of the marks and similarity of goods); TILT LINE for aluminum combination windows and the registered mark TILT-O-LITE for the same goods (one member of the Board dissented on the ground that the term TILT was highly descriptive as applied to storm windows and that the remaining portion of the two marks created a distinctly different impression); ASTRONAR for telephoto lenses and ASTRO for photographic lenses; VELVET 98 for gasoline and the notation VELVET P for lubricating oils and greases; SIGNET for thermostatically operated or thermally responsive electric controls and similar goods, and the registered mark SIGNET for electrical apparatus, including irons, toasters, etc. (different Patent Office classifications were held immaterial where purchasers 'may reasonably attribute a common origin to the products involved')."

However, the TAB found no likelihood of confusion between EZ-TWIST-TI for wire reinforced flat twine and TWIST-N-TYE, registered on the Supplemental Register for identical goods; and with regard to an application to register MICROFAX for light sensitive film and paper, cameras, etc., over the citation of the registered mark MICRO-FILE as used on similar goods.

The CCPA ruled that the mark DURAFILM for certain types of film was unregistrable in view of a prior registration of DUROFOIL for a wrapping material laminated to transparent film material. In another case, the CCPA also refused registration of the mark SELLER's as a service mark for catering food on the ground of likelihood of confusion with a prior registration of the identical mark for smoked fish and smoked and cured meats.

8. *Likelihood of Confusion in Inter partes Cases.* These are cases involving more than one party and usually arise in oppositions or cancellation proceedings. Oppositions occur where, after the Patent Office Examiner approves the mark for publication and the mark is published, someone opposes registration on the ground that the opposer will be damaged by the registration. Cancellation proceedings are brought after the Patent Office actually registers the mark.

Cases where likelihood of confusion was found by the CCPA: DANNY

(*Continued on page 386*)

Now! News of a major breakthrough in TABLETING BY DIRECT COMPRESSION!

Lactose U.S.P. Spray Dried spearheads a giant step forward in tableting because it allows manufacturers to go direct from blender to tablet press! All costly and time-consuming preliminary steps in the conventional wet granulation process are eliminated! With Lactose U.S.P. Spray Dried, the production of tablets is accelerated even when the active ingredient comprises up to 50% of the dry blended formula. And its crystals slip and flow smoothly to guarantee uniform die fill and sharp, compact tablets. Only Western produces Lactose U.S.P. Spray Dried in a variety of colors. Strict chemical and bacteriological specifications and rigid quality control assure highest quality. For details on Lactose U.S.P. Spray Dried, mail coupon today to Western, world's largest producer of Lactose—pure milk sugar.

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City_____ Zone____ State_____

(*Continued from page 343*)

There are many possibilities yet to be exploited in the field of refillable cosmetics and fragrances. Moreover, good salesmanship can overcome buyer resistance to refillable products that have not yet gained the confidence of the consumer. Product image is maintained by the high quality of the fragrances or cosmetics and by stylish and elegant presentation; all the promotion in the world cannot counteract poor products.

WHAT MAKES PEOPLE BUY?

(*Continued from page 288*)

26 per cent more than women in New England in this same age group.

The heavy use of cold cream is in the small cities. Cities of 100,000 to 150,000 favor the use of cold cream. They use 60 per cent more cold cream than women in cities of one million or more.

Your best customer for cold cream? A woman aged 40 to 54 with a high income, married, employed in a medium-sized city and living in Wyoming, Colorado, New Mexico, Arizona, Utah or Nevada.

Medicated Cream. This is for teen-agers. Twice as many young people use this cream than women in the 25 to 40 age groups and over four times as much as women over 50 years. School girls are the big users and income, class and city size do not vary these factors.

New England is the best market, by 9 per cent over the Middle West, by 14 per cent over the South and by 6 per cent over the Pacific Coast. New England, the middle Atlantic, east north central and west north central states and the Pacific Coast are your best markets.

Lubricating Cream. Middle-aged women, between 40 and 50 years old, are your best users. They will generally use three times as much as the younger, 18 to 24 year-old group. They use it 42 per cent more than those over 50 years.

High income is a big factor. An income of more than $10,000 means that a woman uses twice as much as a woman in a $4,000 annual income family. Employed women use four times more than school girls and 27 per cent more than women in the home.

Cities of a million or more favor the use of this cream, as do the mountain states—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada.

Your best bet for lubricating cream is a woman between 40 and 50 years old with a family income of more than $10,000 who works and lives in one of the mountain states.

Shampoo. Teenagers take the prize here. They use,

(*Continued on page 370*)

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PACING PROGRESS IN THE PHARMACEUTICAL INDUSTRY

(*Continued from page 302*)

TABLE 5

Charge Weights and Analytical Values

Run No.	Identification	Triple Pressed Stearic Acid Soap	Triple Pressed Stearic Acid FFA	Triple Pressed Stearic Acid Total	Coconut Oil Fatty Acid Soap	Coconut Oil Fatty Acid FFA	Coconut Oil Fatty Acid Total	Glycerin Dry	Glycerin As is	70% Sorbitol Solution Dry	70% Sorbitol Solution As is	TEA	Water From Soap	Water In Polyol	Water Added	Water Total	Shaving Cream Concentrate Grams	Propellant Type	Propellant Approx. %	Propellant Grams	Propellant Ml
1	8% TEA soap, 70/30, 1% FFA, 2%S	3.77	0.70	4.47	1.62	0.30	1.92	-	-	-	-	2.99	0.38	0.84	87.78	89.00	161.5	40/60	5	8.5	6.0
1A	8% TEA soap, 70/30, 1% FFA, 2%S																161.5	LPG	5	8.5	15.6
2	12% TEA soap, 70/30, 1% FFA, 2%G	5.66	0.70	6.36	2.43	0.30	2.73	2.00	2.08	2.00	2.84	4.49	0.58	0.08	84.34	85.00	154.7	57/43	9	15.3	11.0
3	8% TEA soap, 90/10, 1% FFA, 10%G	4.91	0.90	5.81	0.55	0.10	0.65	10.00	10.38	10.00	14.18	2.92	0.38	0.38	80.24	81.00	154.7	40/60	9	15.3	10.8
3A	8% TEA soap, 90/10, 1% FFA, 10%G																154.7	LPG	9	15.3	28.0
4	12% TEA soap, 90/10, 1% FFA, 10%S	7.37	0.90	8.27	0.82	0.10	0.92	-	-	-	-	4.38	0.56	4.18	72.25	76.99	161.5	57/43	5	8.5	6.1
5	8% TEA soap, 70/30, 4% FFA, 10%G	3.77	2.80	6.57	1.61	1.20	2.82	10.00	10.38	10.00	14.18	2.99	0.38	0.38	77.24	78.00	161.5	57/43	5	8.5	6.1
6	12% TEA soap, 70/30, 4% FFA, 10%S	5.66	2.80	8.46	2.43	1.20	3.63	-	-	-	-	4.49	0.58	4.18	69.24	74.00	154.7	40/60	9	15.3	10.8
6A	12% TEA soap, 70/30, 4% FFA, 10%S																154.7	LPG	9	15.3	28.0
7	8% TEA soap, 90/10, 4% FFA, 2%S	4.91	3.60	8.51	0.55	0.40	0.95	-	-	2.00	2.84	2.92	0.38	0.84	84.78	86.00	154.7	57/43	9	15.3	11.0
8	12% TEA soap, 90/10, 4% FFA, 2%G	7.37	3.60	10.97	0.82	0.40	1.22	2.00	2.08	-	-	4.38	0.56	0.08	81.35	81.99	161.5	40/60	5	8.5	6.0
8A	12% TEA soap, 90/10, 4% FFA, 2%G																161.5	LPG	5	8.5	15.6

Key: See Table 1.

Triple Pressed Stearic Acid	Coconut Oil Fatty Acid	Glycerin USP	Sorbo	Triethanolamine	Fluorinated Hydrocarbons: Freon 12/114 40/60	Fluorinated Hydrocarbons: Freon 12/114 57/43	Liquefied Petroleum Gas
Emersol 132	Neo-fat 255						Isobutane /Propane Blend
Emery Industries	Armour & Co.	Harshaw	Atlas Powder Co.	Carbide & Carbon	E. I. duPont de Nemours Co., (Inc.)	E. I. duPont de Nemours Co., (Inc.)	Phillips Petroleum Company
X-Amal 4601	Lot 1419 1	Chemical Co.	Lot 1276	5/0041/CAB			
Acid No. 206	Acid No. 253	H_2O Content	H_2O Content	Alkalinity	Pressure,	Pressure,	Pressure,
Sap. No. 210	Sap. No. 258				39.9 psig @ 70°F.	49.5 psig @ 70°F.	46 psig @ 70°F.
Iodine No. 0.11	Iodine No. 7.88	3.70%	29.5%	7.15 meq/gram	115.0 psig @ 130°F.	135.4 psig @ 130°F.	128 psig @ 130°F.
					Density,	Density,	Density,
					1.412 g/ml @ 70°F.	1.387 g/ml @ 70°F.	0.546 g/ml @ 70°F.

a 150 ml. beaker. The *p*H was determined by using a Beckman Glass Electrode *p*H meter, Model H 2.

Density. A weighed vessel of known volume was filled with shaving cream concentrate immediately after preparation. The weight of the filled vessel was noted and the tare substance from it, giving the weight of shaving cream added. This weight divided by the volume of the vessel yielded the density of the cream.

Stability. A two-ounce bottle of shaving cream concentrate was stored at room temperature, a one-ounce bottle at 50° C., and a one-ounce bottle was subjected to alternate freezing (approximately 10° C.)—thawing (room temperature) cycling. The degree of separation was noted after one month at room temperature and at 50° C., and after four freezing-thawing cycles.

Pressurized Cream Loading and Evaluation Methods

For pressure packaging, the shaving creams were weighed into six-ounce Crown Can Company Spra-Tainer seamless cans, 2 P type, using the amount indicated on TABLE 5. Thirty cans were packaged for each run. After purging each can with the appropriate propellant, a Precision Valve Corporation valve, model NN, Body A-4, 4″ dip tube was inserted into the can and crimped in place using an Alpha air powered can crimper. Before adding the shaving cream concentrate, the tare weight of the can plus

(*Continued on page 371*)

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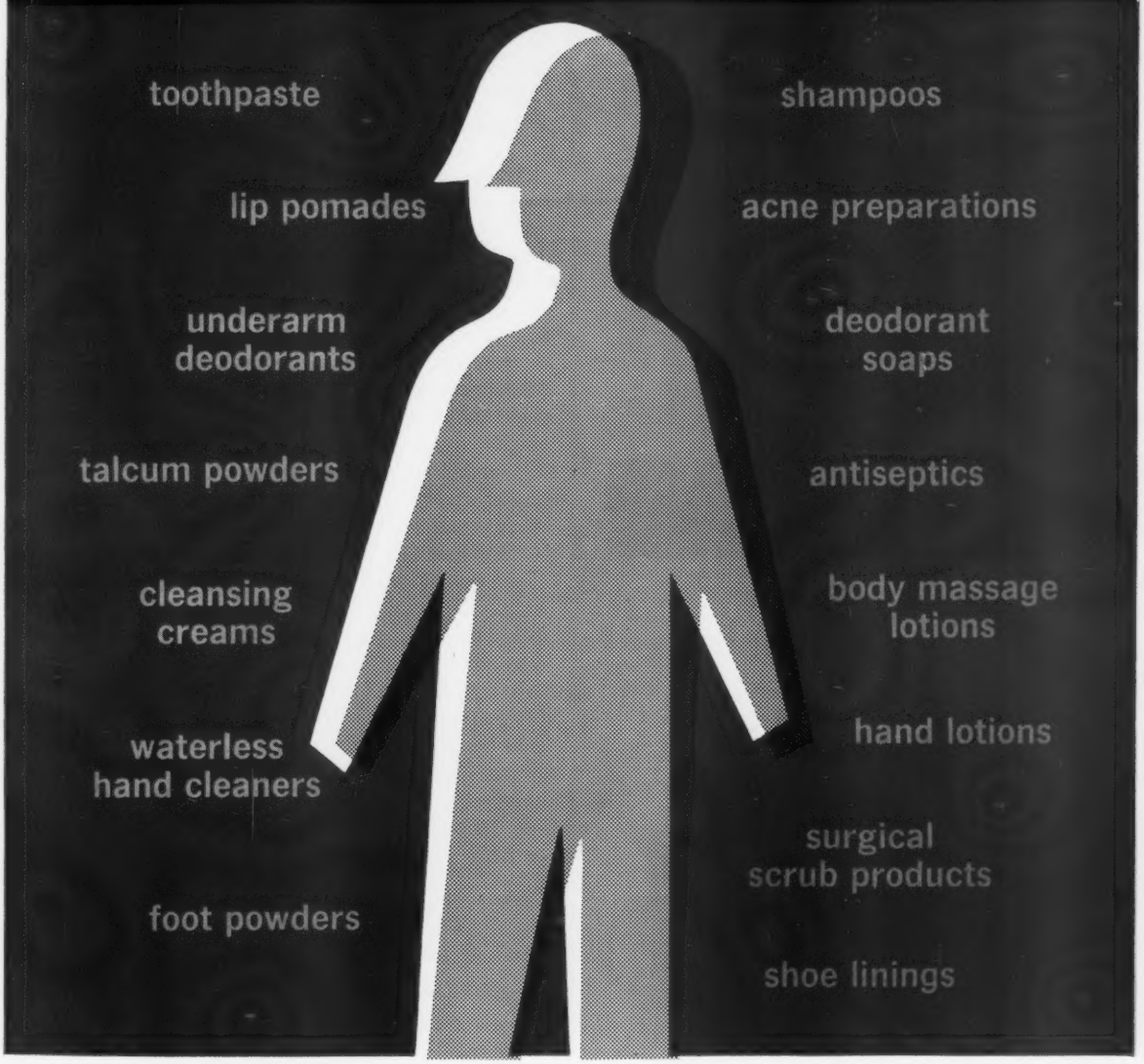

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(*Continued from page 365*)

girl for girl, 8 per cent more than the 25 to 39 age group and 26 per cent more than women over 55 years old.

Income and class do not cause a great deal of variance. Single women, however, use 9 per cent more than married women. Girls in school use more than married and employed women.

Women on the Pacific Coast use 6 per cent more than those in New England and 31 per cent more than women in the east south central states, your poorest market. City size is of no consequence, but consumption drops off a good deal in the smaller communities.

Cologne. This is a product for middle-aged and older women; women between 40 and 54 years are the largest users—70 per cent greater users than the teen-age group and 55 per cent greater users than the late teen to middle-twenties group.

Income is important. The large cologne users have an annual income of $10,000 or more and use 9 per cent more than women whose annual income is from $7,000 to $10,000. Women with incomes lower than $7,000 annually use 22 per cent less than the greatest users.

Married women are 12 per cent better users than single women, and those employed use 20 per cent more than those who are not employed.

New England women are your best buyers. Pacific Coast consumption is less. (Of course, in total volume, the coast runs much higher than New England.) Cities of one million or more prove to be your best market.

Your best bet for cologne is a woman from 40 to 54 years old with a family income of $10,000 a year or more. She is in the upper class socially, is married rather than single and is employed rather than not employed. She also lives in a city of good size. By a small margin, one of the New England states is her home.

Perfume. By a quite substantial margin, women in the 18 to 24 age group are the preferred customers for perfume. Family income and social status are again very important.

New England has the lead again, although the Pacific Coast, and the middle Atlantic and mountain states contribute effectively to the over-all consumption of perfume.

Your best perfume customer, then, has a good income, is in the upper class socially, and may live in New England, the middle atlantic states or the mountain states.

In the light of these facts, we see the variation that exists in consumer wants. Although they are not to be applied or expounded dogmatically, they do pin down influences that should implement planning and distribution techniques.

(*Continued on page 410*)

(*Continued from page 368*)

TABLE 6
Evaluation of Concentrates

Run No.	Identification	Viscosity cps at 25°C 1 Week	2 Months	pH	Density Grams/ml	Stability Room Temp. 1 Month	50°C 1 Month	4 Cycles Freezing-Thawing
1	8% TEA soap, 70/30, 1% FFA, 2% S	26.0	24.0	8.3	1.01	25% H_2O separation	Stable, gelled	5% H_2O separation
2	12% TEA soap, 70/30, 1% FFA, 2% G	35.6	34.4	8.2	1.03	20% H_2O separation	10% H_2O separation	30% H_2O separation
3	8% TEA soap, 90/10, 1% FFA, 10% G	118.8	260.4	8.4	1.03	Stable, heavy lotion	Stable, gelled	Stable, lotion
4	12% TEA soap, 90/10, 1% FFA, 10% S	101.6	99.2	8.3	1.03	25% H_2O separation	Stable, gelled	Stable, lotion
5	8% TEA soap, 70/30, 4% FFA, 10% G	542.4	644.8	8.2	1.02	Stable, heavy lotion	Stable, gelled	Stable, lotion
6	12% TEA soap, 70/30, 4% FFA, 10% S	88.8	142.0	8.1	1.01	40% H_2O	Stable, gelled	25% H_2O separation
7	8% TEA soap, 90/10, 4% FFA, 2% S	2748.0	3468.0	8.4	0.99	Stable, very soft cream		Stable, lotion
8	12% TEA soap, 90/10, 4% FFA, 2% G	257.6	204.0	8.4	0.97	20% H_2O separation	Stable, gelled	Stable, lotion

valve was noted. The cans were then taken to a private label aerosol loader, where the appropriate propellant was pressure filled into the cans using approximately the volume of propellant indicated in TABLE 5. The total charge (shaving cream plus propellant) was 170 grams. All cans were run through a water bath at 130° F. (about 4 minutes exposure) to test for leakage, distortion, or other defects.

The cans were then weighed. The actual percentage of propellant was calculated. Cans containing 5.3 to 5.6 per cent and 9.3 to 9.6 per cent propellant were chosen for evaluation. Each can was then equipped with a Precision Valve Corporation foam spout, Model 4A, so that dispensation and foam properties could be measured. The following test methods were used in evaluating the pressurized shaving creams:

Shaves per Can, Residue in Can after Exhaustion. Three cans of pressurized shaving cream from each run were tested. Twice daily each can was shaken ten times and then dispensed into a vessel with a capacity of about 40 ml. This volume is probably larger than that usually dispensed in actual use. This procedure was repeated until the charge was exhausted. The number of 40 ml. shaves obtainable from

(*Continued on page 373*)

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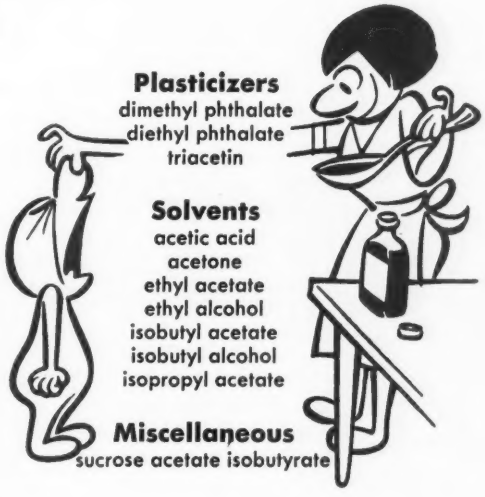

Plasticizers
dimethyl phthalate
diethyl phthalate
triacetin

Solvents
acetic acid
acetone
ethyl acetate
ethyl alcohol
isobutyl acetate
isobutyl alcohol
isopropyl acetate

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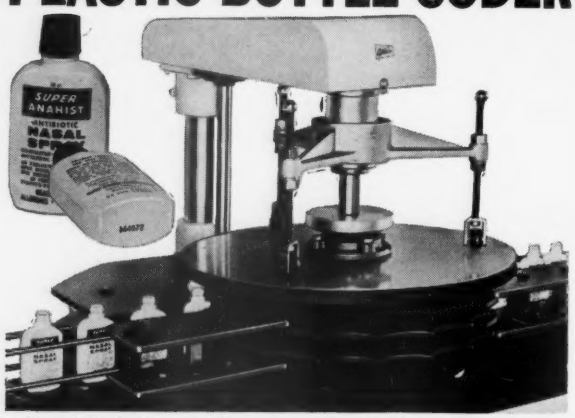

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(*Continued from page 371*)

TABLE 7
Evaluation of Pressurized Creams

Run No.	Identification	Shaves Per Can	Residue % of Original Total Charge	Foam Density 1 Week	Foam Density 1 Month	Foam Strength 1 Week	Foam Strength 5 Months	Drying Time, Minutes 1 Month	Bubble Size Most Frequent Size 1 Week As Dispensed	Bubble Size Most Frequent Size 1 Week 10 Minutes
1	8% TEA soap, 70/30, 1% FFA, 2% S, 40/60, 5%	22	12.3	0.113	0.117	28.1	29.2	29.0	0.065	0.082
1a	8% TEA soap, 70/30, 1% FFA, 2% S, LPG, 5%	68	2.7	0.051	0.043	30.5	31.0	31.2-44.0	0.080	0.113
2	12% TEA soap, 70/30, 1% FFA, 2% G, 57/43, 9%	46	3.4	0.050	0.060	46.3	45.4	9.7	0.092	0.126
3	8% TEA soap, 90/10, 1% FFA, 10% G, 40/60, 9%	31	5.8	0.059	0.072	53.5	46.5	16.7	0.048	0.058
3a	8% TEA soap, 90/10, 1% FFA, 10% G, LPG, 9%	109	2.7	0.033	0.035	46.6	45.5	3.5	0.063	0.097
4	12% TEA soap, 90/10, 1% FFA, 10% S, 57/43, 5%	22	8.2	0.089	0.114	49.2	49.5	34.8	0.032	0.043
5	8% TEA soap, 70/30, 4% FFA, 10% G, 57/43, 5%	22	7.7	0.108	0.109	37.2	35.5	20.8	0.067	0.102
6	12% TEA soap, 70/30, 4% FFA, 10% S, 40/60, 9%	36	4.8	0.058	0.067	44.3	49.3	5.0	0.050	0.061
6a	12% TEA soap, 70/30, 4% FFA, 10% S, LPG, 9%	75	13.7	0.030	0.030	43.7	39.2	5.5	0.069	0.057
7	8% TEA soap, 90/10, 4% FFA, 2% S, 57/43, 9%	32	10.3	0.064	0.067	47.9	44.3	2.3	0.040	0.073
8	12% TEA soap, 90/10, 4% FFA, 2% G, 40/60, 5%	19	13.3	0.090	0.118	43.2	44.8	18.8	0.032	0.052
8a	12% TEA soap, 90/10, 4% FFA, 2% G, LPG, 5%	29	11.0	0.063	0.050	36.8	37.9	5.0	0.074	0.095

each can was recorded. The weight of the can (foam spout removed) was noted, and by subtracting the tare of the can and valve, the shaving cream (or

(*Continued on page 376*)

GC

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(*Continued from page 299*)

TABLE 5

Percentage of Regular Users of Skin Care Products by Geographic Areas

	Cold or cleansing cr.	Cleansing lotion	Foundation cr. or lt.	Medicated cr. or lt.	Night cream	Lubricating cream
Average	34.0	8.5	17.0	11.0	10.0	7.5
New Eng.	34.0	7.8	19.0	14.0	5.5	6.0
Mid. Atl.	26.0	6.5	12.0	9.0	7.0	6.5
S. Atl.	28.0	7.0	12.0	8.5	12.5	8.0
E. N. Cent.	37.0	7.0	19.0	11.0	8.5	7.0
W. N. Cent.	32.0	9.5	22.0	11.0	7.0	7.5
E. S. Cent.	36.0	6.0	23.0	8.0	15.0	5.0
W. S. Cent.	37.0	10.5	14.0	9.5	8.5	6.0
Mountain	45.0	9.0	19.0	11.5	16.0	14.0
Pacific	37.0	12.0	16.0	12.0	10.5	8.0

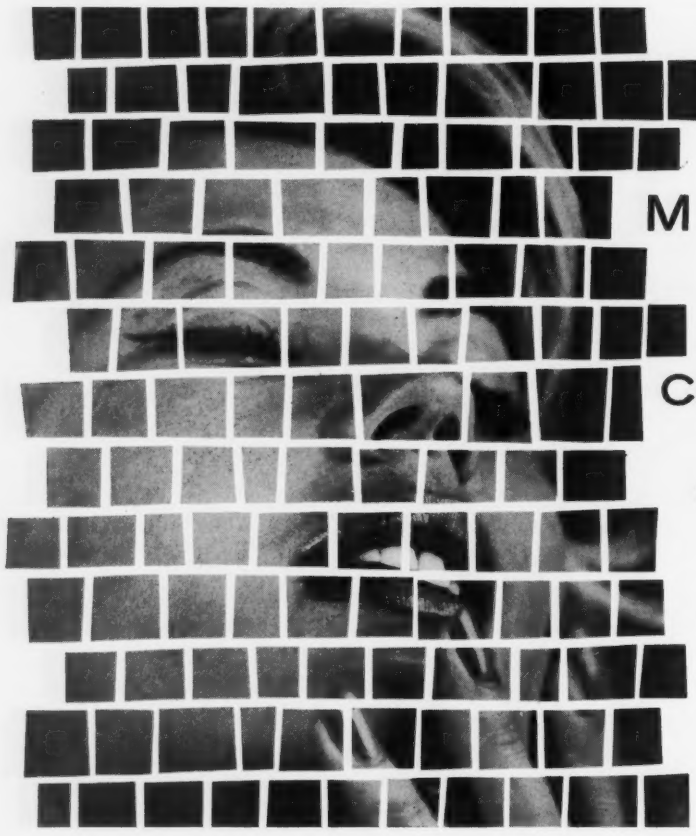
users. These figures underestimate the use of skin preparations. For instance, the over-all regular use of cold or cleansing cream is reported at 36 per cent. However, a study of other tables will show that 50 per cent of all women use a cold or cleansing cream occasionally.

As in the tables for other cosmetic products, which have appeared in previous issues, a substantial variation in regular use according to age is shown. Of all the variations in cosmetic uses, this one factor, from a market and advertising point of view, is undoubtedly the most important.

TABLE 2, which gives the use of these products under the broad classifications of economic and social status, cover occasional users of these products. Variations are as expected because products for the skin, as with makeup, fragrance and other cosmetics, reach their highest degree of regular use under conditions involving status, social competition, recreation, entertaining, and so forth.

TABLE 3, shows the use of products for skin care in cities and towns of different sizes. These percentages also show comparisons between the occasional

(*Continued on page 376*)



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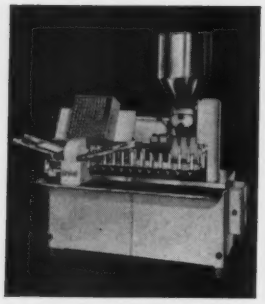

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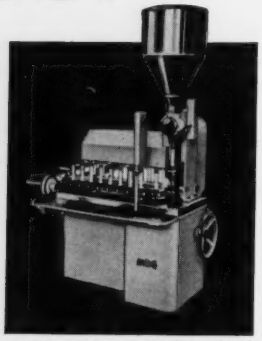

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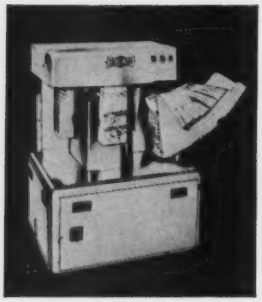

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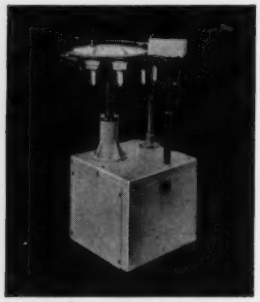

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(*Continued from page 374*)

and the regular user. As against sales of makeup and fragrance, products for the care of the skin are used more liberally and by a higher percentage of women in the smaller cities than in the great metropolitan centers. This may be due to the uniformity of population in small cities or to more frequent exposure to sun and weather.

TABLE 4 gives the geographical variation in the occasional and regular use of skin products, which is substantial, according to region. The enormous United States market has many climatic as well as economic social variations. These differences are much more marked in skin makeup than with many other products.

TABLE 5 shows the decline in percentage of use of cleansing and lubricating creams since 1949.

AEROSOL SHAVE CREAMS

(*Continued from page 373*)

shaving cream plus trapped propellant) remaining in the can was calculated. The percentage of residue in the can based on the total charge was calculated. The total foam volume from a given amount of shaving cream concentrate can be calculated by multiplying the number of shaves per can times 40 ml. per dispensation. These tests were started one week after preparation of the shaving creams.

Foam Density. Three cans of pressurized shaving cream from each run were tested. Each can was shaken ten times before dispensing the cream. A weighed vessel of known volume was filled with the cream to be tested. The weight of the filled vessel was noted and the tare subtracted from it, giving the weight of shaving cream added. This weight divided by the volume of the vessel provided the foam density. Observations were made after one week and one month at room temperature.

Foam Strength (*Foam Consistency*). Three cans of pressurized shaving cream from each run were tested. Each can was shaken 10 times before dispensing the cream. The cream was filled into a 4-ounce opal jar and the foam strength observed as the average dial reading using a Brookfield Model HAT viscometer 20 rpm, T-type spindle A, Helipath stand. Observations were made after 1 week and 5 months at room temperature, using new cans for each determination.

Drying Time. Three cans of pressurized shaving cream from each run were tested. Each can was shaken 10 times before dispensing the cream. About 40 ml. of the cream was dispensed onto a glass plate. The drying time was observed by lightly touching the surface of the cream every half minute, noting

(*Continued on page 380*)

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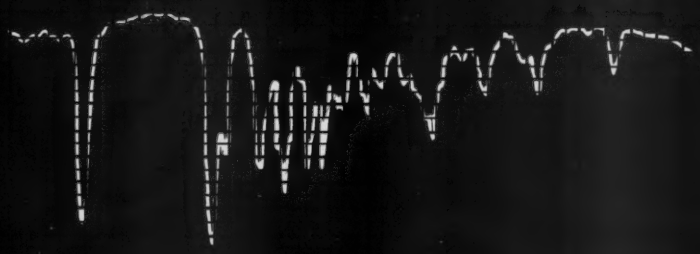

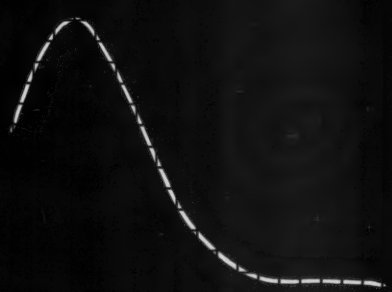

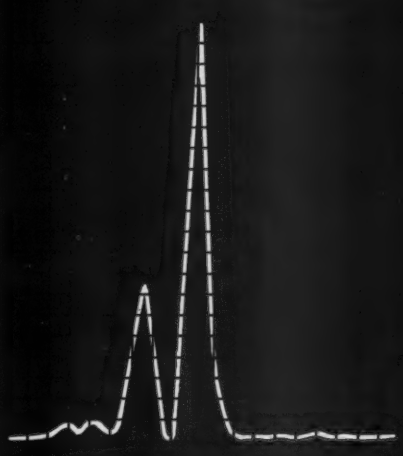

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Perfumer's Shelf

Perfume Panels

Today nearly all companies, cosmetic or otherwise, who use fragrance in their product, buy compounds. But, how many of these companies know what they are doing? Has a competent, professional basis for judging fragrance been developed?

A recent inquiry among men selling perfume compounds showed that there hasn't.

However, certain companies known for their good fragrances, have developed close, workable associations with good reliable suppliers. At one time manufacturers considered perfume panels as the solution to the serious problem of purchasing. Panels came in a variety of forms including the president's wife, a selected group of stenographers and secretaries, a selected group of executives, or an outside panel of beauty editors, demonstrators, and housewives.

Almost universally, these people had no experience in perfuming, and could not detect a competent, professional perfuming job from an unprofessional one, and even more important, had no knowledge of popular tastes and commercial perfume successes. Therefore, it was almost always based on personal likes and dislikes.

One of the most successful panels, or series of panels, still operating with success, has recently undergone a fundamental change which makes an interesting story.

The company has had a policy based on their desire to keep close contact with their suppliers, of recognizing a limited number of suppliers when bids are opened. This policy extends to everything the company buys and has been successful in the packaging field.

When new odors are to be submitted from the suppliers, and have been checked by a committee of factory personnel for proper form, they are sent to a panel of six, three of whom are staff members, and three who are not. This is the first and most important appraisal, since an odor can be eliminated at this point.

After a complete check and appraisal, the odors are sent to a larger panel covering a broader area. This panel is in close touch with the consumer and operates from a sales viewpoint. This last judgment is sent back to the office panel, where charts are made, comparisons studied, odors eliminated, and a final recommendation of two or three odors is sent to a small panel of top executives for final decision.

As we said above, a fundamental change has recently been made in these panels. It was discovered that panel members, particularly those within the office, were unduly influenced by the supplier's names on the labels. Now all sample bottles are sent in standard bottles with only a code number for identification.

So far as an effective, efficient panel goes, it would seem that this is about as useful and successful as anything that has been developed in this industry. As a matter of fact, the company's sales figures in fragrance would verify this statement.

Compare this with another large company, once important in the fragrance business, which now has an appalling record of fragrance failures. Some years ago, the company acquired a new president, who started out being overly suspicious of the compound houses. This opinion, acquired outside of the trade, had been formed by the not too sober conversations of certain trade people in smoke-filled rooms at conventions.

At any rate, he went through a series of maneuvers aimed at freeing himself from the supposed contamination of these houses, which probably cost him a couple of million dollars, in addition to tossing out of the window any established purchasing system.

Recently, he has become occupied with far more important matters, and the whole matter of buying compounds has been allowed to drift. Any new sales managers or division managers, regardless of their previous experience, feel quite competent in replacing old odors with new ones.

One of the company's products, an after shave cologne, formerly an established leader, has had its odor changed three times in three years. Each time it was by someone with absolutely no experience in compound buying, or even any previous association with fragrance.

There would not be anything particular to comment about in all this except for the fact that we have such an appalling record of failure in fragrance introductions. This is certainly not the fault of the creative people, because many beautiful fragrance creations continue to be produced. It seems, instead, that the larger organizations with substantial advertising programs and capable of a reliable marketing job on a good fragrance, are the most disorganized and inept at selecting a new odor.

An Elegant Business

In 1917, perfumers mourned the loss of their best customer. Due to the downfall of Czar Nicholas, the perfume business of the Czarina, which amounted to over $25,000 a year, was lost. As reported in Beauty Fashion, "Her toilet water was manufactured of Parma violets from a private field in Grasse, picked by an army of girls and women between five and seven o'clock in the evening.

"The Czarina's entire suite of apartments used to be sprayed daily with different perfumes. Her toilet table, of solid silver with feet of malachite, was literally loaded with costly bottles, often adorned with rare jewels."

World War I Story

A British officer on duty flying over an immense valley somewhere in the region of Zanzibar, was able to smell the perfume of the huge "Arum lilies" growing there, at the height of 8,000 feet. He later learned that the scent of the flowers was so overpowering in the valley that natives never dared to enter it.

The Perfume of Youth

Lafcadio Hearn, in a paper titled "The Perfume of Youth," once wrote: " 'I remember,' said an old friend, telling me of the romance of his youth, 'that I could always find her cloak in the cloakroom without a light, when it was time to take her home. I used to know it in the dark, because it had the smell of sweet new milk.'

"Which set me somehow to thinking of English dawns, the scent of hayfields, the fragrance of hawthorn days—and cluster after cluster of memories lighted up in succession through a great arc of remembrance that flashed over half a lifetime. . . . And then recollection smouldered into reverie—a reverie about the riddle of the odor of youth.

"That quality of the parfum de jeunesse which my friend described is not uncommon. . . . It signifies perfect health and splendid vigor. It is not personal; it is the fragrance of a season—of the springtime of life. But even as the fragrance of spring, though everywhere a passing delight, varies with country and climate, so varies the fragrance of youth."

Oil of Bergamot

Oil of Bergamot is an important perfume material. Widely used in this country in compounds, and included in the formulas for several world-famous perfumes and men's fragrances, it is also used in a number of household products.

Essential Oil Association of the U. S. A., gives the percentage of Bergamot used in household product formulas:

Room deodorants and related products	0.01 to 0.3%
Cleansers and related products	0.001 to 0.05%
Polishes, waxes and related products	0.001 to 0.03%

According to the Association, "It is noteworthy that the maximum use stated above, approximately 1/3 per cent, is seven times greater than the larger of the other two classes, and this category *does not involve appreciable personal contact;* its dispersion in use is infinitely greater than the other products under usual or normal conditions of use in the home or commercially."

Because of the limited use and because not a single case of injury, harm, discomfort or "sensitization" as the result of contact with any household or technical products containing Oil of Bergamot has been shown a proposed regulation, labeling a product misbranded unless the Oil is clearly listed, is causing some excitement in the trade.

Federal Hazardous Substances Labeling Act states: "Where a food, drug or cosmetic offers a substantial risk of injury from any handling or use that is customary or usual it may be regarded as misbranded under the Federal Food, Drug and Cosmetic Act because its label fails to reveal material facts with respect to consequences that may result from use of this article . . . when its label fails to bear information to alert the householder to this hazard."

Members of the Association agree that this wording could lead to serious and uncalled for product liability suits, that it is not concerned with the Hazardous Articles Law but the Food, Drug and Cosmetic Act, and that it is not clear.

Officials of the Food and Drug Administration maintain that sensitization to Bergamot may be a principal cause of the skin condition, Berlocque Dermatitis.

However, members of the Essential Oil Association feel that this sensitization may have resulted from other unfavorable conditions, such as severe exposure to ultraviolet rays plus an individual's possible hyper-sensitivity.

Bergamot has been used in perfumery for over 200 years; about 100,000 pounds are produced yearly and sent all over the world.

So far, this ruling has only been applied to household products and not to fragrances in cosmetics, perfumes or men's toiletries. We understand that both the French and Italian ambassador have been reassured, from Washington, that there is no present intention of applying it to this industry.

However, should the new cosmetic act be passed by Congress, it could become a problem for the industry. Work is now being done in the aromatic laboratories on Bergamot, both in synthesis and on the removal of certain substances, such as bergeptanes and bergeptoles and others which would result in an oil without any of these so-called sensitizing products.

Hearings have been held concerning three products—Bergamot, Paraphenylenediarmine and Orris Root —all of which have been termed "Hazardous Substances" as active sensitizers.

Gardenia

A gardenia oil from fresh flowers contains the following identified constituents: benzyl acetate, styryl acetate, linalool, linalyl acetate, terpineol, methyl anthranilate. The odor of gardenia flowers suggests a mixture of jasmin, tuberose, and orange blossoms, so that the components of a synthetic duplication might well include methyl phenyl carbinyl acetate, benzyl formate and acetate, hydroxycitronellal and amyl cinnamic aldehyde. To blend the composition, fruity components are useful, such as benzyl isobutyrate, cyclohexanyl butyrate, ylang ylang, and ionone. Modifying ingredients include eugenol, phenacetaldehyde, methyl octine carbonate, phenylethyl alcohol, heliotropin, linalool, bergamot. The composition may be fixed with artificial musk, coumarin, vanillin, tolu, or civet.

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(*Continued from page 376*)

the time at which no peak formed. Tests were run after a one-month storage period at room temperature.

Bubble Size. Three cans from each run were tested after a one-week storage period at room temperature. Each can was shaken 10 times before dispensing the cream. A thin layer of cream was spread on a microscope slide (no cover glass) and observed under a compound microscope fitted with a 10X objective and a calibrated filar micrometer eyepiece. The diameter in mm. of the most frequent bubble size was noted on the foams as dispensed and after ten minutes. The log of the percent change in bubble size was used in the analysis of the data.

TABLE 6 shows the results of viscosity, *p*H, density, and stability tests on the shaving cream concentrates. Stability results after one month at room temperature and at 50° C., and after four freezing-thawing cycles were assigned the following numerical code:

Code	Stability
0	Separation
1	Stable, gelled
3	Stable, cream
5	Stable, lotion

Since three observations were made, the total of the assigned numbers was used in analysis of stability. TABLE 7 shows the results of the tests on the shaving cream foams. Statistically, the properties evaluated are termed responses.

Conclusions and Summary

Charge viscosity or stability properties were not significantly affected by any of the variables in the experiment. Since *p*H and density showed little variation, these data were not analyzed. TABLE 8 indicates the direction of the effect that each of the variables had on the responses studied when the fluorinated hydrocarbon propellant systems were compared using the experimental runs shown in TABLE 3.

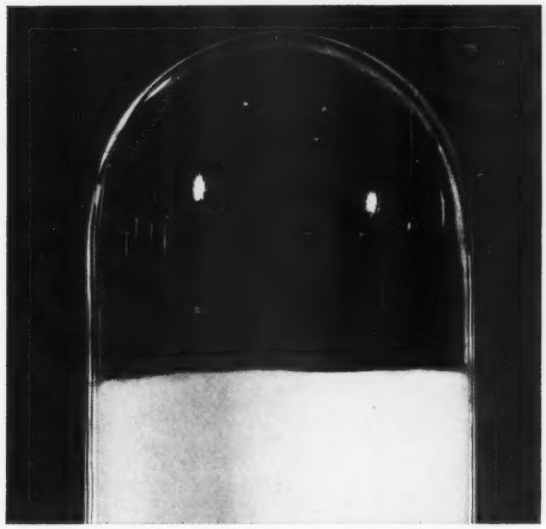
The results show that the number of shaves obtained from a can of shaving cream was increased either by increasing soap concentration or by changing to a fluorinated hydrocarbon of a type which provided increased pressure. The number of available shaves was reduced by using a high proportion of stearic acid in the blended fatty acid. Using a high free fatty acid concentration or a high polyol level also decreased the number of shaves per can.

The residue of shaving cream remaining in the can after dispensation was decreased by increasing polyol concentration and increasing propellant concentration.

Foam density was decreased by using higher propellant concentrations.

Foam strength was increased by using higher soap

(*Continued on page 382*)



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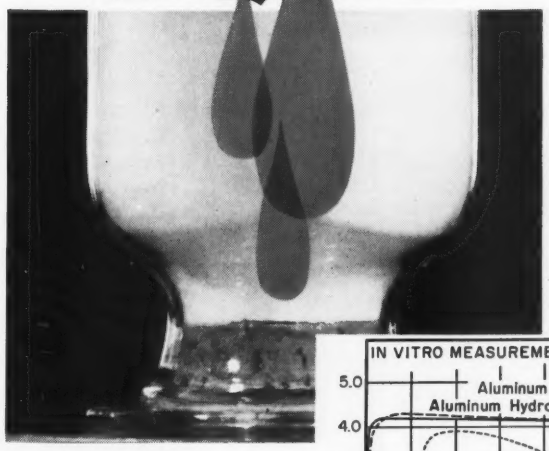

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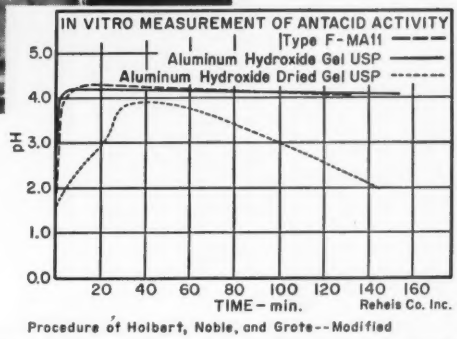
*U.S. Patent No. 2,797,978



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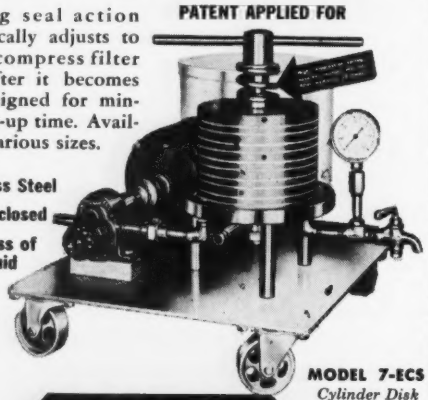

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(Continued from page 380)

concentrations, high levels of stearic acid in the blended fatty acid, high polyol concentration, or high propellant levels.

Drying time was shortened by increasing the free fatty acid or propellant concentration. Increasing the polyol concentration increased the drying time.

Changing the levels of the variables had no effect on the difference in bubble size as dispensed and after ten minutes of air exposure.

The one variable of the experiment which did not show any real effect on any of the properties was the interchange of 70 per cent sorbitol solution and glycerin.

Considering the number of shaves per can, the effect of propellant concentration was much more pronounced with liquefied petroleum gas. Also for the same weight concentration, the liquefied petroleum gas gave more shaves per can than the fluorinated hydrocarbon blend.

Analysis of the data on the amount of shaving cream remaining in the can after dispensation showed that there was no effect of propellant type or concentration.

Increasing propellant concentration decreased foam density. Use of fluorinated hydrocarbons resulted in higher densities. After a one-month storage period, the effect resulting from fluorinated hydrocarbon concentration was greater than the effect of liquefied petroleum gas concentration.

Considering foam strength data after a one-week storage period, higher foam strength resulted when the fluorinated hydrocarbon blend was used, but the concentration differential was greater when liquefied petroleum gas was used. At five months storage, there was little effect from fluorinated hydrocarbon concentration. Concentration effect was still present from the liquefied petroleum gas. At 9 per cent, the liquefied petroleum gas exhibited superior foam strength characteristics.

TABLE 8
Summary of Effect of Variables in the Comparison of Fluorinated Hydrocarbons

Variable	Designation	Shaves per Can	Residue	Foam Density 1 Week	Foam Density 1 Mo.	Foam Strength 1 Week	Foam Strength 5 Mos.	Drying Time	Bubble Size
Soap concentration	A	+				+	+		
Acid ratio	B	−				+	+		
Free fatty acid concentration	C	−							−
Polyol type	D								
Polyol concentration	E	−	−				+		+
Fluorinated hydrocarbon type	F	+							
Fluorinated hydrocarbon concentration	G		−	−	−	+	+		−

Key + change from low to high level has positive effect
Key − Change from low to high level has negative effect.

The fluorinated hydrocarbon blend produced longer drying times. Increasing the concentration of either propellant greatly reduced drying time.

Analysis of the data on the bubble size showed that there was no effect of propellant type or concentration.

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DRUGGISTS TALK BACK

(*Continued from page 297*)

merchandise at no additional cost, or extends credit for a period usually exceeding 30 days (at no 'carrying charge'), or does both; that he maintains voluminous records of prescriptions for safety and convenience; that he willingly operates his business during hours most other retailers are closed; and that he ends up very lucky indeed to net a profit in the range of 6 per cent (citing the same reference as your author).

"I wonder if Mr. Moskowitz has tried to have a prescription filled, delivered and charged from his beloved supermarket or Korvette's on a Sunday, or a holiday, or any evening of the week for that matter? If he suggests that the orderly methods of distribution (which is the real 'miracle') in pharmaceuticals be disrupted, I would propose he collect and *publish* all the facts."

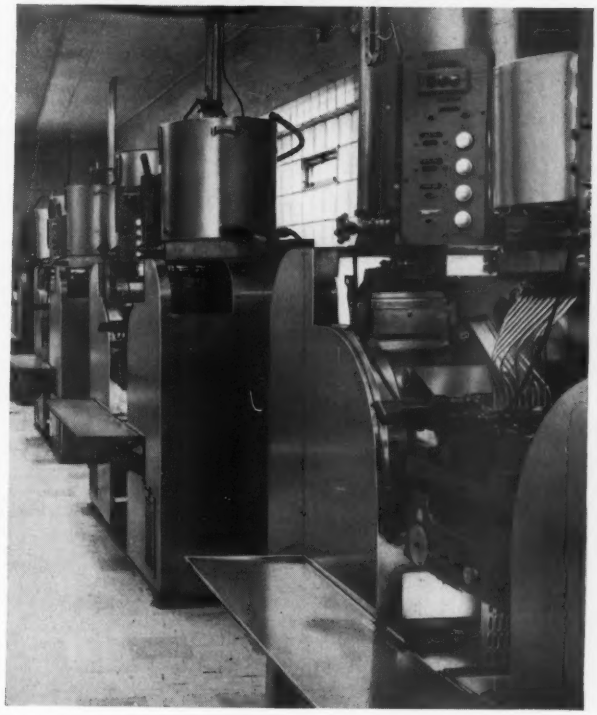
R. M. Cox, Fort Washington, Pa.

"I have been reading your publication for quite some years and have enjoyed it very much. The reason for this letter being written is that I have at last found in the magazine a prize lot of garbage, namely the article by Milton Moskowitz. . . .

"The article is vague, it is biased, the logic is not valid. The author does not state a case, nor does he offer a solution. My feeling is that he is crying because the retail druggist is not helping the manufac-

(*Continued on page 384*)

automation?



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(*Continued from page 383*)

turer increase his business profits as much as he could. . . ."

A. Kelch, O.D., Ph.C., Chicago

"I am a behind-the-counter practicing pharmacist, managing a drugstore filling roughly one thousand prescriptions per month.

"Your article in this month's magazine by someone calling himself Milton Moskowitz is beyond my understanding.

"It is very evident your man knows nothing of the retail drug business except possibly as it exists in the larger cities and on the Atlantic seaboard.

"It seems to me that if your magazine is to be of great usefulness and informative to manufacturers, generally comment from the other side of the fence would be most useful. . . ."

Arthur D. Evans, Ph.G., Mount Vernon, Ohio

Robert W. Hammel, assistant professor of pharmacy at the School of Pharmacy of the University of Wisconsin, has written to ask of Mr. Moskowitz's academic background, occupational experience, and present affiliation(s).

My article appears to have struck a sensitive nerve. I raised the question of whether the drugstore is an efficient marketing outlet for prescription drugs. This question is certainly not original with me. It has been increasingly raised in many quarters in recent years. What is amazing about these angry responses to my article is that none—I repeat, *none*—attempts to deal with this basic question. It is simply ignored—even though this was *the* key point.

Instead, those who took pen in hand to protest this "garbage" and "clap-trap" seem concerned with such extraneous factors as my qualifications (I have been a business writer and editor for ten years) and the "complex" nature of the pharmacy business. If there was confirmation needed of the points made in my article, these letters provide it—in spades.

If these letters are read closely, one can detect a striking resemblance to the arguments raised 25 years ago by the "mom & pop" grocery stores against the giant supermarket chains—and everyone knows what happened to the "mom & pop" stores. Thus, Harry Habler of New York argues that the pharmacy "must purchase the legend drug which is being detailed on the chance he may receive a prescription for it," and he complains that "we also have to carry identical drugs which are made by different manufacturers, thereby increasing inventory." And R. M. Cox of Fort Washington, Pa., points out that the pharmacist "extends credit for a period usually exceeding 30 days (at no 'carrying charge')" and that "he willingly operates his business during hours most other retailers are closed." Similar points are made

(*Continued on page 385*)

(*Continued from page 384*)

in other letters.

These are precisely the arguments used unsuccessfully by the grocers to fight the supermarkets. These retailers also objected to carrying a large inventory. They preferred to carry three or four coffee brands instead of ten. They also extended credit to customers—with no carrying charges. And they also stayed open at inconvenient hours to service consumers. However, they proved to be inefficient vehicles for mass volume retailing—and they lost out to the supermarket. The small grocers also were loathe (like the pharmacists) to compete on price. The supermarkets did—and this brought customers into the stores in droves.

This is not to gainsay the fact that the pharmacy business is different from the grocery business. It is. But it is not all that different. Both are retail marketing operations, with many similar problems. As a matter of fact, since the advent of brand name marketing in ethical drugs, the *similarities* have become more pronounced. The pharmacist is fond of magnifying far out of true proportion the "professional service" he offers. But since doctors changed from writing their prescriptions in Latin to brand names, the pharmacist has become primarily an order-taker. The housewife who goes into a store to buy Maxwell House Coffee is not too different from the patient who goes into a drugstore with a prescription for Tetrex—as far as the retailer is concerned. Of course, in the grocery the shopper just picks the product off the shelves unaided by the retailer, while in the drug outlet the prescription has to be presented to a licensed pharmacist. In both cases, however, it's a brand name system in operation. And because it is a brand name business today—not a compounding of elixirs—we are witnessing a mushrooming of mail order sales of prescription drugs and a rapid growth of pharmacy departments in discount houses.

The letters complaining about my article also reveal tensions existing between the pharmacist and the manufacturer. Obviously sensitive about the charge that they do not compete on price, the druggists do not answer this charge—but simply turn their wrath on the manufacturer. "If the manufacturers would compete on price, we would too" runs the chorus. This, of course, begs the question—and I believe it is hogwash besides. There is a good deal of free-wheeling in the grocery business but this is partially because food manufacturers are marketing their wares through a dynamic retailing system. This is not the case in the drug field, where the retail end of the business is, by comparison, static. In other words, if I might repeat what the representative of one of the largest ethical drug companies told me, "We have a Twentieth Century manufacturing process harnessed to an Eighteenth Century distribution system." The fact that pharmacies stay open on Sunday does not alter this basic situation.

—Milton Moskowitz

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(Contoinued from page 363)

BOY for fresh tomatoes and ANDY BOY registered for a variety of food products including fresh vegetables, both marks accompanied by a picture of a smiling boy;

COOL SIP for a liquid concentrate and a preparation in powder form for dietary beverages or soft drinks;

PHENISTAN for a cold and cough remedy and PHENERGAN registered for an antihistamine;

KLIPPER KING for fingernail clippers and KUSTOM KING registered for toe-nail and fingernail clippers;

TAILOR-TEE for ladies' wearing apparel and TAILORED T for men's and boys' cotton knit tee shirts;

KING-KUP for candy and KING's for the same products;

B in a diamond-shaped border design for tubing and couplings and a substantially similar B in a diamond-shaped border for metal pipes and tubes;

WINTER CARNIVAL for men's and boys' underwear and WINTER CARNIVAL for women's boots;

SWEETHEART for a number of paper products including toilet tissue and the same word for soap;

TECHOGRAPH for pencils, leads and lead holders, and the registered mark TECHNIFLEX for colored pencils;

HUVILON for polyurethan prepolymers and the registered mark UVINUL for ultraviolet light absorbers used in the applicant's products;

SCOTTY for mops and registered marks including the word SCOTCH for a variety of products including polish, nonslip floor covering etc.;

ELECTROMATIC for fire pumps and accessories and the identical mark for automatic electric control systems;

"BREAKFAST CUP For all the family" for a table beverage made from soy beans, figs and grains, and the unregistered mark BREAKFAST CUP for coffee; and

KINTEL for electronic instruments and CINTEL for photo-electric cells.

9. Cases in Which No Likelihood of Confusion Was Found by the CCPA. SEW-EASY for ready-cut doll clothes and SEW-HANDY for sewing machines;

SUMARK for nozzles, etc., for garden hose and the registered mark MARK for unions for pipes or rods, cup leathers and plumbing supplies;

RICHFIELD for hosiery and various registrations for the same word for gasoline and similar products;

EASYTINT for white paint and the registered mark EASY for touch-up enamels supplied in self-spraying containers;

HY-CROFT for poultry hatching eggs and baby chicks and the registered mark HY-LINE for poultry, seed corn and hatching eggs;

SHUX for toilet, laundry and industrial liquid and solid cleaners, and the registered mark LUX for soap flakes, soap and liquid detergent;

IVYCASUAL for men's and boys' dress and sport shirts and pajamas and the registered mark IVY LEAGUE MODEL for similar clothing;

TERMICIDE as a service mark for exterminating services and the registered mark TERMINIX for similar services;

ROSE HALL for use on women's, children's and men's wearing apparel and the registered trademark ROBERT HALL and ROBERTA HALL applied to wearing apparel;

MICROtrol for electrical gauging and control apparatus for machine tools and MERCOID, MERCOID CONTROL and MERCONTROL for similarly used products;

UNIPAK for various electrical capacitors and the identical mark for plastic bags used for resinous material;

CORAL for a household liquid synthetic detergent and the registered marks BLUE CORAL and BLUE CORAL SEALER for an automobile polish and polish preservatives;

YARDLOADER for vehicle-mounted material loaders and registration for CARLOADER;

KOVERON for coated vinyl wall coverings and the registered mark KALISTRON;

SERVOSPEED for electronic motor speed control systems and registrations for SERVO for electrical connectors and control equipment;

SERVOTORQUE for rotary hydraulic actuator and registrations for SERVO for electrical connectors and control equipment;

ASMA-KETS for medicinal tablets for the relief of bronchial asthma and hay fever and the mark ASMA-TAB for a similar medicinal preparation;

QAF for fasteners of the bolt and nut type and opposer's registered mark Q-FASTENERS;

WEAREVER and FLOR-EVER, both for vinyl floor tile;

WANDER used chiefly in the treatment of tuberculosis and WARNER for a wide range of pharmaceuticals;

GALVICON for galvanizing and rust-resistant paints and solvents and GALVANUM as a protective coating for galvanized iron surfaces; and

DEEBIE HALL and DEBBY ROSE both used on women's and girl's wearing apparel.

10. Miscellaneous Court Cases of Special Interest. Proctor & Gamble successfully prevented registration of the word CARJOY for cleaning and polishing materials because of its prior use of JOY for soap powder.

The TAB denied an opposition based on the well-known trademark LUX against the registration of the certification mark STABI-LUXE FINISH used to certify that lace had been treated with a certain finish. However, an application to register the word LOVE for a liquid detergent was denied upon opposition by the owner of the trademark DOVE for washing powder and detergents in bar form for toilet use (TAB). The TAB refused to find likelihood of confusion with regard to the use of the trademark VITEX

(*Continued on page 392*)

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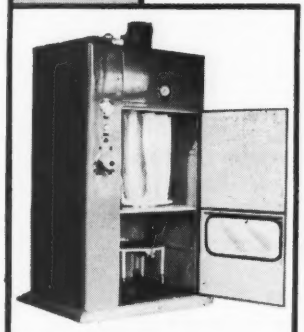

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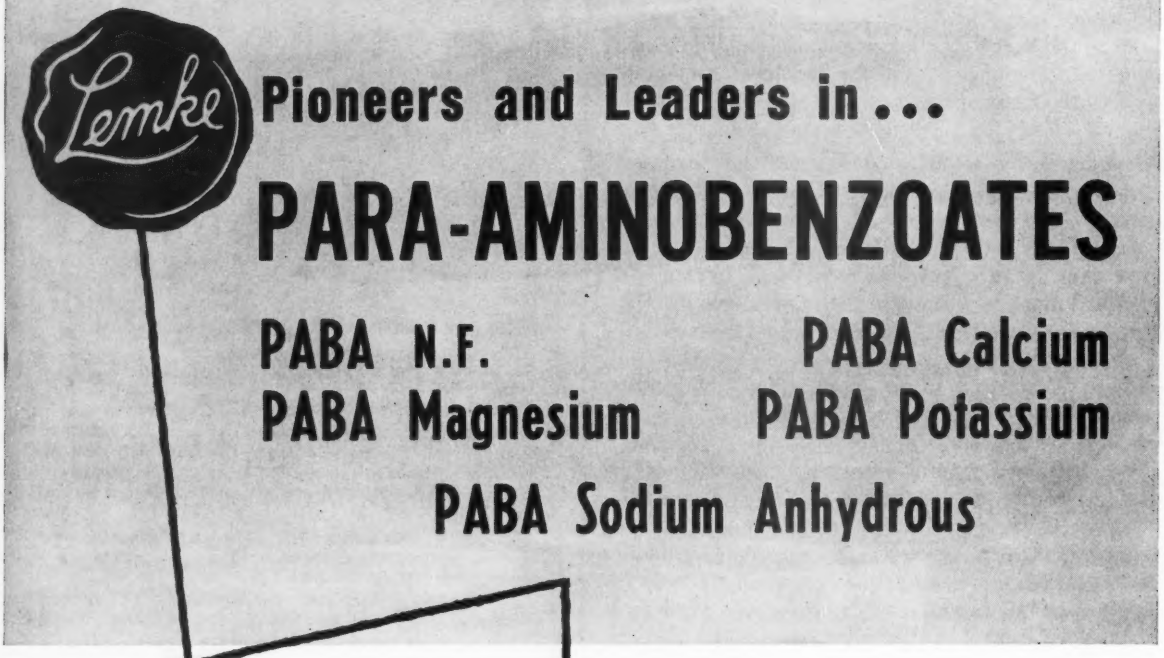

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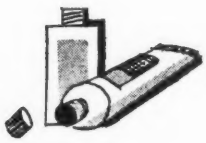

Advancing Therapy

Hormonal Therapy of Metastatic Female Breast Cancer

2-Alpha-methyl dihydrotestosterone propionate, a variant of testosterone, is compared to its parent substance for effectiveness in the treatment of metastatic female breast cancer. (I. S. Goldenberg and M. A. Hayes, in *Cancer*, July-Aug. 1961, p. 705.)

This compound differs from testosterone by saturation of the double bond between carbon atoms 4 and 5 and by an additional methyl group at carbon atom 2. The new preparation was found to be as effective as testosterone propionate in causing objective remissions of metastatic lesions, with very few masculinizing effects.

Effect of androstanediol dipropionate therapy on the clinical course and hormonal excretion was investigated by A. Segaloff, J. B. Weeth, E. L. Rongone and P. J. Murison (*Cancer*, July-Aug. 1961, p. 707).

Of 24 patients with advancing metastatic breast cancer treated with 100 mg. of 5α-androstane-3α, 17β-diol dipropionate intramuscularly 3 times a week, 4 patients showed pronounced subjective improvement; 2 also showed definite objective regression of metastatic disease. Virilization occurred in 6 of 8 patients treated longer than 6 weeks.

Oral Trichomonas Therapy

Metronidazole, given orally, is effective against infestation with *Trichomonas vaginalis* (*Brit. Med. J.*, Oct. 29, 1960, p. 1307). Chemically, metronidazole is 1-beta-hydroxyethyl-2-methyl-5-nitroimidazole.

Tests *in vitro* and *in vivo* have shown this drug to have considerable anti-trichomonal activity. In animal experiments its toxicity has been shown to be low. Normal growth of Doderlein's bacillus was obtained on medium including metronidazole even in a 1-in-300 concentration. In clinical use Doderlein's bacillus has been shown to reappear during treatment in association with a return to normal *p*H of the vagina. The drug has no action against monilia.

Recommended therapeutic dosage is one tablet (200 mg.) of metronidazole ("Flagyl," May and Baker) thrice daily for seven days. Side effects of the drug are said to be few and mild, unless a dose of 600 mg. per day is exceeded.

Antitumor Effect in Rats

Observations on the antitumor effect of N-dichloroacetyl-DL-serine are reported by H. Blondal, I. Levi, J. P. A. Latour, and W. D. Fraser in *Radiology*, June 1961, p. 945.

N-dichloroacetyl-DL-serine, in the form of the sodium salt, FT-9045, is shown to have antitumor effects in experimental tumor-bearing animals. When used as the sole therapeutic agent, it greatly inhibited the growth of sarcoma-37 in mice and, to a much lesser extent, the growth of Walker-256 tumor in rats. When FT-9045 was combined with cyclophosphamide in treatment, an enhanced effect was obtained against both tumors. Combination with x-irradiation similarly increased the effect against the Walker rat tumor.

Nitrites in Bronchial Asthma

Irving Hirshleifer and Yogesh Arora report on results achieved by treatment of bronchial asthma cases with nitroglycerine and erythrityl tetranitrate. (*Dis. Chest*, March 1961, pp. 275-83.)

The authors found that nitrites surpassed isoproterenol in potency and duration of action when used for the symptomatic relief of bronchial asthma. Sublingual administration of nitrites showed no advantage over oral administration.

Separate tests of sublingual nitroglycerine and sublingual erythrityl tetranitrate resulted in subjective improvement and increased 1 second timed vital capacity. Tests in 2 patients showed that 0.6 mg. of nitroglycerine is equally effective whether administered orally or sublingually; the authors have found that both nitrites are as effective orally as sublingually in patients with cardiovascular disease. Six patients were then tested with 15 mg. erythrityl tetranitrate, 0.3 mg. nitroglycerine, and 15 mg. isoproterenol, all given by the sublingual route. They were evaluated by closed spirometry methods and 1 second timed vital capacities. The time of onset of action was usually within 10 minutes with all 3 drugs. The maximum effect averaged 20 minutes for nitroglycerine and for isoproterenol and 45 minutes for erythrityl tetranitrate. The duration of action was 1 to 3 hours with erythrityl tetranitrate, 45 to 90 minutes with nitroglycerine, and 20 to 45 minutes with isoproterenol.

In none of these 6 patients was the peak effect of isoproterenol upon vital capacity greater than that of the nitrites; it was often lower.

Effect of Syndet on Steroid Absorption

The effect of polysorbate 80 ("Tween" 80) on the gastrointestinal absorption of spirolactone ("Aldactone") was studied by C. L. Gantt, N. Gochman, and J. M. Dyniewicz (*Lancet*, March 4, 1961, pp. 486-7).

Plasma levels of spirolactone (Gochman and Gantt, *J. Pharm.*, in press) were established by spectroflurometric quantitative analysis. In four normal subjects plasma levels were taken after the administration by mouth of 400 mg. of spironolactone alone and with 40 mg. of polysorbate 80 ('Tween' 80), and also after 200 mg. of spironolactone with 200 mg. of polysorbate.

Results suggested greater absorption from the gastrointestinal tract when the detergent was given.

Most 3-keto-Δ-4 steroids are reduced by the liver to their relatively inactive tetrahydro derivatives, and the method of analysis of spirolactone used depends on the presence of the 3-keto-Δ-4, 6 configuration. (Gochman, Gantt). Therefore, the increase in blood-levels of the free compound could be due to its absorption into the lymphatic system without an increase in total absorption from the gastrointestinal tract. Preliminary studies of the concentration of spirolactone in the thoracic-duct lymph of dogs suggest that this is not true. The ratio of the concentration of the steroid in the lymph to that in the peripheral blood did not exceed unity when the steroid was given with and without the detergent.

Interference of the surfactant with the metabolism or excretion of the steroid must be considered. The "half-life" of spironolactone in the plasma (about 13 hours) is not significantly altered when the polysorbate is given, suggesting that the metabolism is not changed. The recovery of spirolactone from the urine has been consistently greater when the detergent is given than when spironolactone is given alone. The effect of spironolactone on sodium excretion also seems to be enhanced when the detergent is given.

Jones, Culver, Drummey, and Ryan (*Ann. Intern. Med.*, 1948, 29, 1) presented data suggesting that polysorbate 80 will promote the absorption of fats and fat-soluble substances from the gastrointestinal tract.

Other steroids are being studied to determine the spectrum of this effect and the possible differences in venous and lymphatic absorption, the authors report.

Polysorbate 80 is not toxic, being used in foodstuffs, and it is inexpensive.

New Drug for Angina Pectoris

Glyceryl trinitrate is generally accepted as the drug of choice, both for the rapid relief of the pain of angina and to prevent it if taken just prior to exertion. Unfortunately, its evanescent action limits its usefulness and it is of no value if taken at prescribed intervals during the day. A new preparation, the trinitric acid ester of trimethylol propane ("etrynit"), has been studied in Scandinavia (Nordqvist, 1959) and found to be of clinical value, although no papers have yet been published. The drug is claimed to be as effective as glyceryl trinitrate in the treatment of acute attacks and to have a longer duration of action.

A controlled trial has therefore been carried out to compare etrynit with glyceryl trinitrate regarding rapid relief of pain in the acute attack of angina at the Cardiac Department, King's College Hospital, London (E. Sowton and S. Oram, *Brit. Med. J.* 1961, p. 794-5).

A double-blind controlled trial was organized, using apparently identical tablets containing glyceryl trinitrate 1/130 gr. (0.5 mg.) and etrynit 10 mg., and the results were assessed by the established technique of sequential analysis (Armitage, 1954; Snell and Armitage, 1957). Thirty-five ambulant patients were treated. They were attending a cardiac clinic and had angina of effort, diagnosed by reliable clinical stories, supported in 33 instances by electrocardiographic changes. No patients with mitral- or aortic-valve disease or anaemia were included.

The authors conclude on the basis of these tests, that, for the treatment of the acute pain of angina, etrynit is as effective as glyceryl trinitrate. The usual dose is 10 mg. sublingually, but in most cases 5 mg. is adequate.

The frequency of troublesome side-effects was low and was equally common with the two drugs, but with etrynit 5 mg. side-effects were less severe than with glyceryl trinitrate 1/130 gr. (0.5 mg.).

Etrynit is worthy of further study, the authors feel, particularly with regard to its prophylactic action. It is the only drug which has yet convinced these investigators that it measures up to glyceryl trinitrate for the relief of the acute pain of angina.

As etrynit is a nitrate ester it is likely that its mode of action is similar to that of glyceryl trinitrate, although hydrolysis in the body is probably slower. In animal experiments the actions of these two drugs on smooth muscle and on the coronary arteries appear to be identical.

On the isolated heart of the rabbit the time of onset, duration of action, and maximum effect are the same for glyceryl trinitrate and etrynit when doses are equal. Clinically, using forearm plethysmography on healthy test subjects, and a dose of etrynit five times greater than that of glyceryl trinitrate, the effect began at the same time with both preparations, but the maximum effect of etrynit was obtained later than that of glyceryl trinitrate and was more lasting. As measured by changes in the blood-pressure, the effect of etrynit occasionally lasted for five to seven hours (Nordqvist and Varnauakas, 1961).

There are a few patients who genuinely cannot tolerate glyceryl trinitrate, and for these the availability of an alternative preparation of equal effectiveness in the acute attack should prove of great value.

In view of the short duration of action of glyceryl trinitrate and the failure, in the authors opinion, of pentaerythritol tetranitrate or any other drug to prevent attacks or even to reduce their frequency or severity, if etrynit can be shown to be as effective as a preventive as we have found it in the acute attack it should prove a most valuable drug.

New Antidepressant Drug

A novel antidepressant which includes a tranquilizing effect has been developed by Merck Sharp & Dohme and is now available to the medical profession. Amitriptyline, "Elavil," is especially useful in the treatment of mental depressions accompanied by anxiety, agitation and tension.

Chemically, amitriptyline is 5-(3-dimethylamino - propylidene) - dibonzo [a, d] [1, 4] cycloheptadiene. It is not an amine oxidase inhibitor, nor is it related to the dextro-amphetamines.

In clinical trials on 3,000 patients the product has been found to be indicated in the depressed phase of mani-depressive reactions, involutional melancholia, schizo-effective depressions, and neurotic depressive reactions. The new drug is also said to relieve reactive depressions. When amitriptylene is used with electroshock therapy, the total number of shock treatments required is said to be reduced.

Because of its anticholinergic effect, the product is contraindicated in patients with glaucoma and in those who may have problems of urinary retention. •

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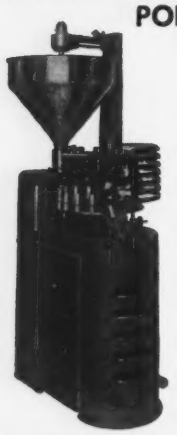

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(*Continued from page 387*)

on opposer's vitamin concentrate and use of the identical mark on applicant's fertilizer. In a California case, the use of the word DU BARRY on shoulder pads, press cloths, shammy skins, aprons, hairnets, earguards, roller pins, beauty caps and complexion cloths, was successfully enjoined by the registered owner of the identical name for cosmetics.

However, Du Pont, the owner of the registered trademark PRO-TEK for a hand cream and related products, was held not entitled to prevent PROTEX-A-HAND and PROTECT-A-HAND on a similar product. In this case, the mark was characterized as a weak mark, whereas in the Du Barry case the mark there was held to be a strong trademark and incontestable under the Lanham Act.

Miles Laboratories was unsuccessful recently in its attempt to prevent the use of the term MILK-O-SELTZER on a product of the same nature as its ALKA-SELTZER. A California judge considered that Miles' survey evidence, which even included sound motion pictures and the testimony of a professor of psychology was not persuasive of possible confusion.

A case of possible landmark significance was recently decided by the New York Court of Appeals. In this case Lanvin won an injunction against the rebottling of its products even though the defendant had used an inscription on its bottles advising the purchasing public of the fact of rebottling. However, in this case the ruling was based on the New York Penal Law which makes the repackaging or rebottling of any product bearing the manufacturer's trademark a misdemeanor.

Steroid Patents on Microfilm

The Patent Office offers on 16 mm. microfilm, lists of the steroid compounds specifically named in each patent classified in Class 260, subclasses 239.5, 239.55, 239.57, 397, 397.1, 397.2, 397.3, 397.35, 397.4, 397.45, 397.47, and 397.5 of the Patent Office classification. The compounds are listed in alphabetic order for each patent and the patents are arranged in one numeric series without regard to classification.

The availability of this information is the result of the development of mechanized processes for searching patents in the steroid art. This search system is described in Patent Office Research and Development Report No. 19, *Revised Steroid Search System Coding Manual.* This publication is for sale by the U. S. Department of Commerce, Washington 25, D. C. Price 25 cents.

Listings of the steroid compounds comprise two (2) reels of microfilm. They are priced at $15.00 a set and may be obtained upon order addressed to the Commissioner of Patents, Washington 25, D. C.

RECENT PATENTS

2,988,482—The Commonwealth Engineering Company

(*Continued on page 398*)

Progress with FATTY ACIDS

THE "SLICKS"... AND STEARIC ACID

America's leading "slick" periodicals owe their smooth page surfaces to the effect of the Stearic Acid used in paper coating compounds. This Fatty Acid is also an important ingredient in printing inks.

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Oleic Acid is a key ingredient in a recently-patented carburetor and engine cleaning composition. Formulation, which includes water, hydrocarbon oil, alcohols and ammonia as well, is introduced through carburetor while idling.

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Specification	LOW IODINE VALUE STEARIC GROCO 55L Triple Pressed	OLEIC ACID GROCO 4 4°—6° Titre
Titre, °C.	55.0—55.5	4—6
Titre, °F.	131.0—132.0	39.2—42.8
Color 5¼" Lovibond Red*	0.3 max.	1 max.
Color 5¼" Lovibond Yellow*	1.0 max.	10 max.
% Unsaponifiable		1.5 max
Saponification Value	209—211	198—203
Acid Value	208—210	197—202
% F.F.A. as Oleic Acid		99 min.
Iodine Value (WIJS)	0.25 max.	94 max.
Refractive Index 50°C. (Av.)		1.4500

* 1" cell for GROCO 4

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Compounder's Corner

Isopropyl Linoleate for Cosmetics

Isopropyl linoleate is an essential fatty acid ester recently introduced by A. Boake, Roberts & Co., London, England. It is suggested as an additive to topical preparations intended to counteract dryness of skin, nails, and hair.

Anti-dandruff preparations, foot salves, shaving creams and suntan oils are among the products said to benefit from the addition of small proportions of essential fatty acids and their derivatives. They have also been proposed for use in lipsticks as protection against possible dryness or irritation caused by dyes.

Creams containing 1.5 to 2.0 per cent of isopropyl linoleate have exhibited a beneficial effect on dry, chapped and fissured skin, the manufacturer reports.

Aleuritic Acid, Tech. Grade

Aleuritic acid (9, 10, 16-trihydroxypalmitic acid) is now commercially available, it was announced by William Zinnser & Co., New York. Extracted from shellac, aleuritic acid is suggested as an intermediate in the preparation of civetone, dihydrocivetone and epi-ambrettolide. In the pharmaceutical field, glucose monoaleuritate has potential uses in parenteral feeding and other applications.

Improved Bubble Bath

Addition of a nonionic detergent to a bubble bath mixture of anionic surfactant and alkylolamide will yield a product with very stable foam. A liquid bubble bath mixture suggested in British patent 818,158, calls for nonionic compounds obtained by condensing one mole of octyl cresol or octyl phenol with nine to 10 moles of ethylene oxide. The example specifies octyl cresol condensate (nine moles EO). *Schimmel Briefs*, No. 315, 1961.

Onyx Adds New Sarcosinate

A 30 per cent aqueous solution of sodium N-lauroyl sarcosinate has recently become available from Onyx Chemical Corp., Jersey City, N. J. "Maprosyl 30" is an anionic surface active agent claimed to be mild to skin and mucous membrane, to exhibit low toxicity and little taste.

The material's anti-ezyme, foaming, and detergent action as well as its strong adsorption on dental plaque make it a suitable dentrifice ingredient. An addition of 2 to 3 per cent (anhydrous basis) is suggested.

Antibacterial potency of quarternaries is boosted by an addition of "Maprosyl 30," according to Onyx. This synergistic effect may be utilized in mouthwash formulations.

Maximum foaming and detersive powers of "Maprosyl 30" are in the alkaline and mildly acid pH range, which suggests its use in shampoos in combination with sodium or alkanolamine lauryl sulfate and fatty alkanolamide.

The anticorrosive properties of the surfactant make it a desirable component of aerosol products, such as dentrifices, shaving creams, shampoos, and the like.

Ethoxylated Lanolin Alcohols

Pharmaceutical emulsions, shampoos, various pressure packaged cosmetics, hydro/alcoholic preparations, hair wave and hair dye preparations, perfumes, vitamins and antiseptics, are just a few of many products where ethoxylated lanolin alcohols have actual or potential applications.

The polyoxyethylene derivatives of selected lanolin alcohols, more simply termed ethoxylated lanolin alcohols, represent a new series of nonionic ether surfactants with a wide variety of properties dependent on the number of moles of ethylene oxide reacted with a given weight of wool wax alcohols. Since the molecular weight of lanolin alcohols is not definitely known, the use of moles in the latter material is not expressed as such, but as weight of alcohols reacted with a given weight of ethylene oxide.

The ethoxylation of lanolin alcohols produces a complex mixture of end products. There will be a total of at least 33 nonionic ethers, comprised of 8 ethoxylated normal alcohols, 5 ethoxylated iso alcohols, 6 ethoxylated anteiso alcohols, 5 ethoxylated dihydric alcohols, 5 ethoxylated sterols and 4 ethoxylated trimethylated sterols. And as in all ethoxylated alcohols there is always a distribution curve for the number of moles of ethylene oxide combined with the alcohol, which further indicates that these nonionic ethers are quite complex in composition.

The degree of ethoxylation of the lanolin alcohols will determine the surface-active properties, the hydrophilic-hydrophobic balance, and the solubilities in various media. These nonionic polyoxyethylene aliphatic alcohol and sterol ethers can act as O/W emulsifiers, solubilisers, emollients, extreme lipophilic to extreme hydrophilic occlusive agents on the skin, plasticisers, softening agents, conditioning agents, film-formers, wetting agents, gelling agents and dispersing agents. The stable nonsaponifiable ether structure makes them suitable for high and low *p*H formulations. (G. Barnett (Coty) Soap, Perf. & Cos., Aug. 1961, p. 734.)

Skin Research

TECHNIQUES

Ohya et al. and *K. Ito* recommend dental mass or agar mixtures to make negative molds of skin. Polyester resins or epoxyresins are best for the positive impression. *Dixon, Howarth* describe a method of three-dimensional reconstruction of tissue structures such as nerves, which involves photography of thick frozen sections.

SKIN SURFACE—PART 1

Ehring reviews the history of microscopic examination of the living skin pointing out that *Lombard* (1911) first used the microscope for this purpose after *Unna* had shown much earlier that application of oil to the skin surface makes it possible to see more minute details After a period of enthusiasm there was stagnation. The author reappraises the possibilities of dermatoscopy, especially for investigation of the capillaries. *Tronnier* measured erythema with a photoelectric apparatus developed at the University of Gottingen and with the commercial Elrepho and reports comparable results. *Daniels, Imbrie* recommend a photoelectric reflectance meter, which in connection with appropriate filters and standards permits the expression of skin color in 2-3 digit numbers. *Taruki* checked the reliability of the Fischer and Fischer-Saller tables of hair color by use of a photoelectric color and gloss meter. The Fischer-Saller tables are better. *Taruka* also gives data on color and gloss of human hair and rabbit fur. *Takahashi* used the instrument on 120 Japanese children from birth to 9 years of age. The skin of the newborn is more reddish, becomes more yellow up to the time of dentition, then again more red. Color intensity decreases with age. A standard color plate developed by the Japanese Institute for Color Study is a usable substitute. *Kajikawa, Iisawa* studied differences of skin reflectance after exposure to sun and at different seasons. *Barnicot* brings data on skin reflectance of the African Yoruba tribe, of Europeans, and of mulattos. Reflectance of male skin usually is lower than that of females in all groups.

Hanusova, Dolejsi used *Wolf*'s methods to study the microrelief of the skin surface in 100 men and 100 women. Sex differences are found in the details of second degree (contour of whole cells) and fourth degree (due to papillary pattern) markings. The latter and fifth degree markings (due to differences involving the corium) seem to be inherited.

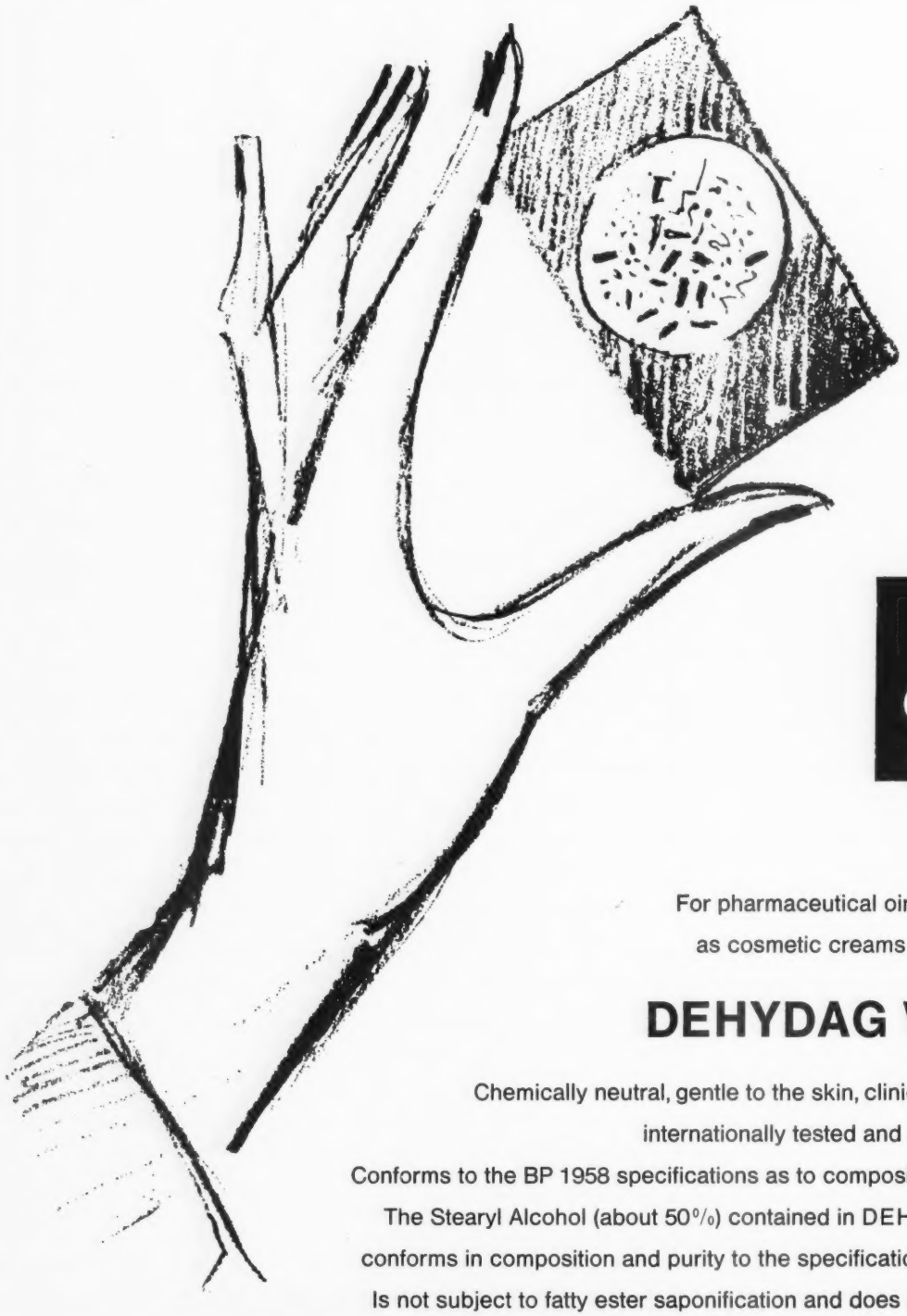
Observing that minerals develop a heat dependent blue surface fluorescence when touched by human hands *Przibram* investigated the source of this phenomenon. A blue fluorescent substance can be extracted from keratin material by water. If stacked layers of stratum corneum are heated in a closed ampoule they become more highly fluorescent. At higher temperatures the tinge changes from blue to yellow, and the color of the keratin to deep brown. Yet the blue fluorescence can be extracted even from the discolored material.

EPIDERMIS IN MAN—PART 2

Stupel, Szakall deal with epidermal anatomy and physiology as a basis for understanding the action of soap and detergents on the skin. *Grenberg* investigated the histogenesis of the epidermis in human embryos. At 3-5 weeks, it is best developed as a cover of flat cells over the neural tube, while on the lateral body surfaces and the facial portion of the head it exists in the form of a cambium. The later stages of development are described in some detail. *Pinkus* elaborates the concept of symbiosis as of basic importance in understanding normal and abnormal growth in the human epidermis. Malpighian cells derived from the secondary ectoderm, melanocytes of neural crest origin, and the epithelium of eccrine sweat ducts and pilary complexes, which was differentiated in fetal life, but remains potentially interchangeable with epidermis, form a biologically balanced whole. Their mutual relations can be analyzed by planned experiment or in certain diseases such as keratosis senilis, Paget's disease, and others.

Melczer, Cseplak examined unfixed surviving tissue by means of phase and polarization microscopy and could identify intercellular spaces, intercellular bridges, and intracellular fibrils in the epidermis. *Braun-Falco, Weber* found Hale-positive material identified as acid mucopolysaccharides in the intercellular spaces, especially between prickle cells. *Tosti* points out that it is difficult to distinguish between cytoplasmic basophilia due to RNA and basophilic staining of the cell surface. The epidermis is not a syncytium, rather consists of individual cells which can be separated by acantholytic agents, one of them weak ammonium hydroxide. Intercellular bridges and nodes are considered shrinkage artefacts; instead of tonofibrils the living cell contains sub-microscopic, macromolecular protonofibrils, which act as a folding-unfolding system enabling the cell to do osmotic work. Only in the higher layers do the fibrils become "vulcanized" and precursors of keratin. Naturally occurring and arteficially produced acantholytic cells are suitable for cytometric and cytochemical studies. *Bucciante* describes the alterations of tonofibrils during mitosis. Spaces free of bridges and fibers appear between cells, later fibers are reconstituted.

(*Continued on page 397*)



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Odland used the electron microscope for an investigation of the structural relationship of cells in human epidermis. He gives a redefinition of the intercellular bridge. The node of Bizzozero consists of a pair of attachment plaques, one from each of two contiguous cells. Seven layers of different density occupy the 350 A space between the opposed plaques, which are dense oval plates, 0.3-0.7μ in diameter and more than 100 A thick. The plaque appears to be a greatly thickened modification of the epidermal cell membrane and itself possesses a lamellar substructure. Tonofibrils approach the attachment plaque from the interior of the cell. Their constituent tonofilaments fray out and show a cross striation near their termination at the internal surface of the plaque. This complex of terminal tonofibril, adjacent cytoplasm, and cell membrane is coupled with a similar complex from the adjacent cell to comprise the intercellular bridge. Bridges are found in all layers of the epidermis. Cell membranes in between areas of attachment are surprisingly convoluted and carry microvilli in the lower layers. They are more straight in the upper layers. While basal cells contain melanin granules, they are sharply differentiated from melanocytes, which have no tonofibrils or bridges, rather send cytoplasmic processes between the basal cells. The latter have finger-like projections downward, their membrane is beset with thickenings. Basal cells are separated by a 300 A wide zone of low density from a moderately dense basement membrane, which appears homogeneous and is 150-400 A thick. *Puccinelli* discusses the potentialities of examining the skin with polarized light and comparing the results with those of electron microscopy.

Stratum Corneum—Part 3

According to *Puccinelli* elementary horny lamellae of round or oval shape with neat regular and curved edges, 40-70μ in diameter and very thin, can be obtained by physical and chemical disintegration of keratin material. The thinnest of these lamellae are not much more than 100 A thick, have surface folds, and include disciform bodies, 100-600 A in diameter, which are considered to be molecular aggregates cementing the lamellae. *Flesch* separates sharply consolidation of fibrous keratin precursors (keratinization) from decomposition of cellular proteins and formation of non-keratinous components of the stratum corneum (differentiation). These are two distinct vital functions of the epidermal cell. In his paper, which deals mainly with chemical data, he gives the weight of the human epidermis as 3-10 mg. per cm^2 of skin surface. *Siebert* compared the Barnett-Seligman procedure for sulfhydryl groups with the Gram and Gram-Weigert methods. Results are similar. Blocking SH-groups weakens Gram reactivity, conversion of disulfides to SH-groups makes Gram negative areas positive. The Gram-positive granules in keratin cells, however, are not influenced by blockage of SH-groups. *Goslar* reports that astra blue stains keratin selectively in the skin of snake, rat, and man. He attributes this to the disulfide content. *Steigleder* describes that esterase activity varies between the ridges and troughs of normal human plantar keratin. The sweat ducts contain PAS positive, ninhydrin-Schiff positive, esterase positive material, which also gives reactions of lipids. The skin surface is covered with an "esterase mantle." *Kruse* using microincineration confirms older reports that in normal skin the stratum corneum has the highest calcium content, with some calcium also present in the basal layer.

Epidermal Regeneration

Chaudhry et al. observed daily rhythms of rectal temperature and epithelial mitotic activity in the ear and check pouch of hamsters. Mitotic activity was higher and temperature lower at 12.30 PM than at 20.30 (8.30 PM). *Smirnova* caused superficial wounds by scraping the epidermis off turtles, roosters, and rats. Epithelium regenerates rapidly under a leucocytic crust. At first, a multilayered covering of flat elongated cells is formed. Later, a new epithelial generation is growing in and forms a basal row of light staining large cells, which are the source of the final epidermis. Adnexal epithelium takes active part in re-epidermization. *Marberger* reports that buried strips of epidermis form complete epithelized tubes in rats. This method is useful in man for reconstruction of the urethra.

Scheving re-investigated mitotic activity in human epidermis and confirmed its cyclic character. There is a major peak at 3 AM (200 per cent increase), a minor peak between 2 and 7 PM (100 per cent increase). Mitoses are concentrated in nests in the basal layer and basal portion of the stratum spinosum. *Tosti et al.* find almost even distribution of mitoses between basal layer and prickle layer, in diminishing number up to the 4th row. One fourth to one third of mitoses in the basal layer are heterotypic, with their axis vertical. After stripping off the keratin, a greater percentage of mitoses in all layers have vertical axis. Prickle cells are formed by herotypic division of basal cells, homotypic division of some prickle cells, and direct transfer of intermitotic cells (Flugelzellen) from the basal layer. The hypothesis of functional independence of basal and prickle cells can not be supported. Detailed analysis of normal, hyperplastic, and hypoplastic epidermis indicates rhythmic character of mitotic activity and suggests the presence of functional mediators. If mitotic arrest is produced by X-rays or colchicine the number of granular cells increases parallel with the antimitotic effect. The higher mitotic activity before the arrest the more pronounced is the hypergranulosis. The authors conclude that there is an inverse relation between life span and mitotic rate.

Vasil'eva followed the rate of exfoliation by painting brilliant green on the skin. Exfoliation decreases with age, but increases again after 60 years. Regeneration is fastest on the face, waist, and forearm, slowest in the lower part of the leg. Pathologic conditions also were investigated. *Monash, Blank* determined the location and regeneration of the barrier to insensible water loss by stripping with cellophane tape (Wolf method). This barrier is located mainly in the inner two thirds of the stratum corneum. After its removal water evaporates from the skin as from a free water surface. The barrier reforms within 48-72 hours.

(To be continued)

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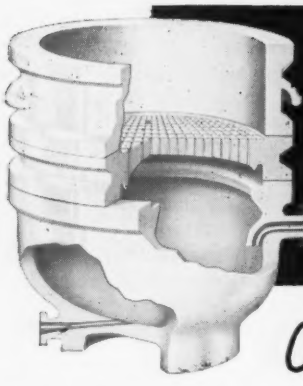

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(Continued from page 392)

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2,988,525—American Colloid Company—Foundry Mold Composition.

2,988,547—C. F. Boehringer & Soehne — 1-Phenyl-3-Methoxy; Hydroxy;or Benzyloxy-5-Sulfanilamido Pyrazole-1, 2.

2,988,548—United States of America—11, 12-Epoxy-Pregnenolone Derivatives.

2,988,550—Imperial Chemical Industries Limited—Pyrimidine Derivatives.

2,988,551—Union Chimique Belge (Belgium)—Piperazine Derivatives.

2,988,553—E. Merck Akt.—Novel Esters of α-Tocopherol and the Acid Addition Salts Thereof.

2,988,555—Olin Mathieson Chemical Corporation — 12α-Halo Steroids of the Pregnane Series.

2,988,557—Schering Corporation—16α-Thiol Corticoids.

2,989,437—Upjohn—Anti-Inflammatory and Anti-Bacterial Decongestant Nasal Spray Compositions.

2,989,438—UCLAF—Process of Purifying Heparin, and Product Produced Therefrom.

2,989,440—Ortho Pharmaceutical Corporation—Urokinase-A Plasminogen Activator and Methods of Obtaining the Same.

2,989,441—Byron E. Leach—Therapeutic and Prophylactic Agent For Upper Respiratory Infection.

2,989,523—Upjohn—2-Methyl-6-Fluoro Compounds of The Pregnane Series.

2,989,527—Hickson & Welch Limited—Pyrazolo and Indazolo Triazolyl Stilbene Disulfonic Acids.

2,989,528—American Home Products Corporation—4-(W-Dialkylaminoalkyl)-2-Phenyl-1, 4-Benzothiazines.

2,989,530—Merck—N-(5-Nitro-2-Furoyl)-Morpholine.

2,989,532—American Home Products Corporation—α-[3-(1, 2, 3, 4-Tetrahydroisoquinolyl)]-Benzhydrol.

2,989,537—Ciba—Pyrazolo [2, 3-a] Imidazolidines.

2,989,539—Smith Kline & French Laboratories — 3-Amino-4-Phenylpyrazoles.

2,989,550—Upjohn — 2-Methyl-11-Oxygenated Progesterones.

2,989,551—Ciba—Cyclo-Pregnanes.

2,989,552—The British Drug Houses Limited—4-Organothiomethyl-3-Oxo-Δ^4-Steroids.

2,990,325—Olin Mathieson—Vernamycin.

2,990,327—Synergistics, Inc.—Composition and Method for Treating Biliary Dyskinesia.

2,990,328—Upjohn — Stable Therapeutic Compositions Containing Acetylsalicyclic Acid-Anhydride.

2,990,331—Chas. Pfizer & Co.—Stable Solutions of Salts of Tetracyclines for Parenteral Administration.

2,990,332—Wallace & Tiernan Inc. — Pharmaceutical

(Continued on page 399)

(*Continued from page 398*)

Preparations Comprising Cation Exchange Resin Adsorption Compounds and Treatment Therewith.

2,990,333—Upjohn — Gelatin Capsule with N-Alkyl Amide, for Aqueous Vehicles.

2,990,334—Upjohn—Gelatin Capsules Enclosing a Water-Miscible Vehicle.

2,990,336 — Permanent Hair Waving Corporation — Process for Hair Waving and Preparation Therefor.

2,990,338—Jacob John Gibson—Composition for Determination of Glucose in Body Fluids.

2,990,400—Upjohn—4, 17α-Dimethyl-9α-Fluoro-11-Oxygenated Testosterones.

2,990,401—American Cyanamid — 11-Substituted 16α, 17α-Substituted Methylenedioxy Steroids.

2,990,407—Les Laboratoires Francais de Chimiotherapie — 17 - Desmethoxy - 17 - α - (N - Acetyl - N - Methyl - Amino)-Reserpine.

2,990,414—Syntex, S. A.—17-Undecenoate of Estradiol.

2,990,415—American Cyanamid — 9-Substituted Δ^4-Androstenes.

2,990,416—Upjohn—Steroid Compounds.

2,991,180—Andre Faure—Process for the Preparation of Perfumed Extracts and in Particular of Powders from Alcohols Containing Liquid and Substances and Products Resulting Therefrom.

2,991,223—Upjohn — 3α, 11β Dihydroxy-11α-Lower Alkyl-%β-Pregnan-20-One 3-Hemisuccinate, Its Salts, and Buffered Preparation Thereof.

2,991,224—Dale V. Bell—Gingival Pack.

2,991,225—N. V. Koninklijke Pharmaceutische Fabrieken v/h Brocades-Stheeman & Pharmacia Netherlands —O - Methylbenzhydryl - β - Dimethylaminoethyl Ether Process and Composition for Symptomatic Relief of the Syndrome of Parkinsonism and of Spastic Skeletal Muscle Disorders.

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2,991,284—E. Merck Akt.—Derivatives of Cocarboxylase.

2,991,287—The Wm. S. Merrell Company—11-Pyridyl and 11-Piperidyl Substituted Ethanoanthracenes and Process of Preparing the Same.

2,991,288—Aktieselskabet Pharmacia—Camphidine Derivatives.

2,991,291—Upjohn—3-Indolyl Vinyl Ketones.

2,991,294—Syntex S. A. — 1-Methyl Equilenin Compounds.

2,991,295—Upjohn—11β-Hydroxy-17α-Alkyl Estrogens.

2,992,163—Eli Lilly and Company—Use of 4-chloro-1, 2-Pyrazole for Controlling Epileptic Seizures.

2,992,164—S. B. Penick and Company—Ion Exchange

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6

Separation of Gramicidin and Tyrothricin.

2,992,165—Robert E. Thompson—Method of Potentiating Acth Preparations.

2,992,166 — Cilag-Chemie Aktiengesellschaft — Diagnostic Composition.

2,992,216 — Chas. Pfizer & Co. — $\Delta^{4,6}$-3-Keto Steroid Compounds.

2,992,217 — Syntex S. A. — 16α-Hydroxymethol-Progesterone.

2,992,222 — Abbott Laboratories — Tetrahydrofurfurylpiperazines.

2,992,225 — Abbott Laboratories — Certain 4-(5-Nitro-2-Furyl)-Thiazoles.

2,992,231 — Mead Johnson & Company — Pyrrolidyl Derivatives of 3-Arylindenes and 3-Arylindanes.

2,992,232 — Chas. Pfizer & Co. — N-(Benzo-Furanyl and Thianaphthenyl)-N-(β-Substituted Ethyl)-Ureas.

2,992,241—G. D. Searle & Co.—3, 17-Dioxygenated 6β-Halo-5-Methyl-19-Nor-5β-Androst-9-Enes.

2,992,242 — Organon, Inc. — New Steroids of the Oestrane Series Non-Oxygenated in the 3-Position.

2,992,243 — Francesco Vismara S.p.A. — 3-Keto-17-Hydroxy-Compounds of Etiocholane and Androstane.

2,992,244 — The Upjohn Company — 2α-Methyl-9α-Fluoro-11β-17α-Dihydroxy-4-Pregnene-3, 20-Dione 17-Acylates.

2,992,245 — The Upjohn Company — 2α-Methyl-9α-Bromo-17α-Hydroxy-4-Pregnene-3, 11, 20-Trione 17-Acylates.

2,992,970—Don Baxter, Inc.—Aqueous Sorbitol Enema Solution and Method of Using Same.

2,992,971 — Ortho Pharmaceutical Corp. — Biological Stains.

2,992,972—The Upjohn Company—Steroids.

2,992,974—Allan S. Belcove et al.—Biological Testing Device.

2,993,042 — American Cyanimid Co. — 16β-Hydroxy-9, 11-Substituted-4-Pregnene and 1, 4-Pregnadiene-3, 20-Diones and Esters Thereof.

2,993,061 — The Upjohn Company — 2, 6-Dimethyl-21-Fluoro-Steroids of the Pregnane Series.

2,993,068 — Ethicon, Inc. — 1-Aminomethyl-1-Amino-cyclohexanes.

2,993,831—U.S. Vitamin & Pharmaceutical Corporation —Polyalkylenebisaniline Anesthetics.

2,993,833—Eli Lilly and Company—Erythromycin Esters.

2,993,834—Lepetit S.p.A.—Antibacterial Compounds.

2,993,835—Parke, Davis & Company—Anticonvulsant succinimide.

2,993,836—The Dow Chemical Corp.—Sustained Release Tablets.

2,993,837—Charles E. Frosst & Co.—Enteric Coated Tablets.

2,993,866 — Colgate-Palmolive Co. — Aerosol Glass Cleaner.

2,993,890—U.S. Vitamin & Pharmaceutical Corporation —β-Substituted Indoles.

2,993,891 — Chattanooga Medicin Co. — Butyrolactone Derivatives (III).

2,993,895—American Home Products—3-Benzhydrylmorpholine.

2,993,896—U.S. Vitamin & Pharmaceutical Corporation —N-[(2, 4-Diaminotriazin-6-yl)Methyl]-3-Oxypyridyl Betaines.

2,993,897—U.S. Vitamin Pharmaceutical Corporation—s-Triazinylmethyl Ureas.

2,993,899—Miles Laboratories, Inc.—Acetylenically Unsaturated Piperazine Derivatives.

2,993,900 — Lakeside Laboratories, Inc. — 4-Hydroxyalkylpiperazinoalkyl Glycolates.

2,993,905—U.S. Vitamin & Pharmaceutical Corporation —N-Dialkylaminoalkyl, N-Pyridylethyl Anilines.

2,993,927—The Upjohn Company—1, 1-Bis-(p-Aminophenyl)-2-Alkanols and Esters Thereof.

2,994,639 — The Upjohn Company — Tetracycline-Novobiocin Composition.

2,994,640 — Byk-Gulden Lomberg Chemische Fabrik G.m.b.H. — Anti-Inflammatory Therapy with Purine Molecular Compounds.

2,994,642 — Francois Jean Bossard — Sodium Chloride Toothpaste Having a Silica Aerogel Carrier.

2,994,694 — Ciba Pharmaceutical Products — 18-Oxygenated Steroids.

2,994,695 — U.S.A. — Tetrahydropyrimidine derivatives.

2,994,700—Olin Mathieson—Acetamide Derivatives.

2,994,701 — Merck & Co., Inc. — 2-Sulfamyl-4-Substituted-Thiazoles Having Diuretic Properties.

2,994,702 — Merck & Co., Inc. — 2-(p-Carboxybenzene-Sulfonylamino)-4-Methyl-5-Sulfamyl Thiazole.

2,994,703 — Parke, Davis & Company — Succinimide Compounds.

2,994,707 — Glaxo Labs., Limited — Neoergosterol Derivatives.

2,994,708 — Lasdon Foundation, Inc. — 3β-17β-Dialkoxy-5-Androsten-16-Ols.

MARKET RESEARCH

(Continued from page 311)

out overpowering the product.

A growth in packages with removable brand identification, packages that are more easily opened through pour spouts, and multi-packs is predicted.

The Design Laboratory maintains a Printing and Packaging Museum, which was established to give manufacturers a better insight into the changing role of packaging. The museum, primarily a service for business and industry, is open to manufacturers and others with packaging problems. A pre-Revolutionary War beer bottle and 19th Century herb, tonic and drug packages are among the interesting packages in the museum's collection. This is just one more service offered by the Container Corporation. ●

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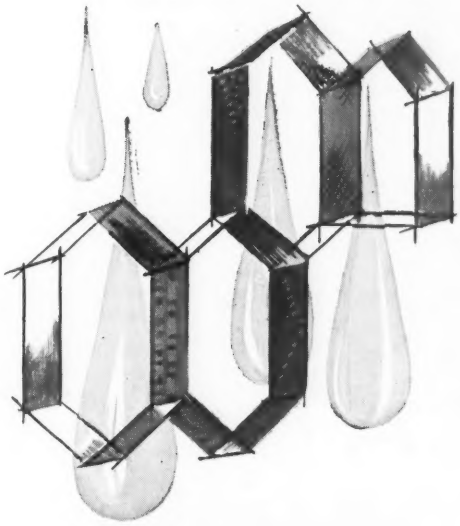

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Indices listing TRADE MARKS, TRADE ASSOCIATIONS and TRADE PUBLICATIONS.

A list of all PRIVATE FORMULA houses.

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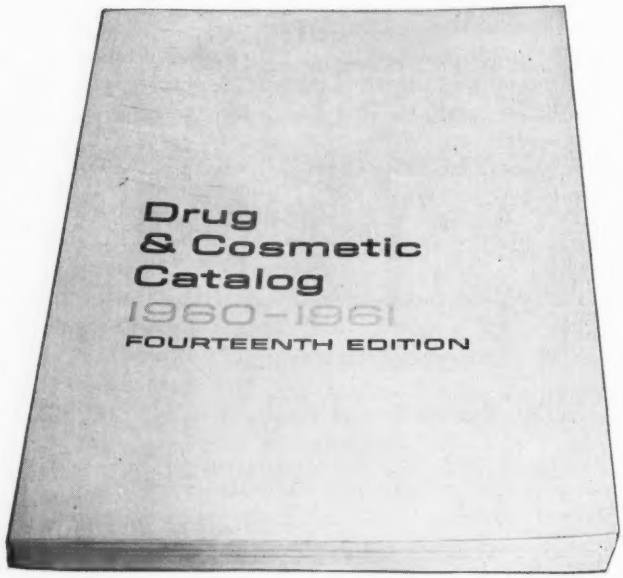

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COMING EVENTS . . . .

SEPTEMBER

10-13 **Pharmaceutical Manufacturers Assn.**, International Section, Broadmoor Hotel, Colorado Springs, Colorado.

11-15 **Instrument Society of America**, fall conference and exhibit, annual meeting, Los Angeles, Calif.

12 **Society of Cosmetic Chemists**, Chicago Chapter meeting, (S.C.C., 2 East 63rd St., N. Y. C. 21)

12 **Synthetic Organic Chemical Manufacturers Assn.**, luncheon meeting, Hotel Roosevelt, N. Y. C. (S.O.C.M.A., 261 Madison Ave., N. Y. C. 16)

13 **Society of Cosmetic Chemists**, N. Y. chapter meeting, Hotel George Washington, N. Y. C. (S.C.C., 2 East 63rd St., N. Y. C. 21)

14 **Pharmaceutical Advertising Club**, meeting, Roosevelt Hotel, N. Y. C. (P.A.C., 489 Fifth Ave., N. Y. C. 20)

14-16 **Drug, Chemical & Allied Trades Assn.**, annual meeting, Pocono Manor Inn, Pocono Manor, Pa. (D.C.A.T.A., 1 Liberty St., N. Y. C. 5)

17-20 **First Annual Conference on Pharmaceutical Analysis** sponsored by the Extension Services in Pharmacy in cooperation with The School of Pharmacy, University of Wisconsin, (Richard S. Strommen, 301 Pharmacy Building, Univ. of Wis., Madison, Wis.)

18-25 **International Seaweed Symposium**, Biarritz, France.

20 **American Society of Perfumers**, closed meeting, Advertising Club, 35th St. and Park Ave., N. Y. C. (A.S.P., 630 Fifth Ave., N. Y. C. 20)

24-27 **Federal Wholesale Druggists Assn.**, annual meeting, The Greenbrier, White Sulphur Springs, W. Va. (R. C. Schlotterer, 2 Lexington Ave., N. Y. C. 10)

26-27 **Society of Cosmetic Chemists** seminar meeting, Barbizon Plaza (S.C.C., 2 East 63rd St., N. Y. C. 21)

29-30 **American College of Apothecaries** annual convention, Jack Tar Hotel, San Francisco, Calif. (Hamilton Court, 39th & Chestnut St., Phila., Pa.)

OCTOBER

1-4 **Pharmaceutical Manufacturers Assn.**, public relations section, Skytop Lodge, Skytop, Pa.

1-5 **National Assn. of Retail Druggists'** annual convention, Hotel Fountainbleau, Miami Beach, Fla. (N.A.R.D., 205 W. Wacker Dr., Chciago 6, Ill.)

9-12 **11th Annual Instrument Symposium and Research Equipment Exhibit**, National Institutes of Health, Bethesda 14, Maryland.

10 **Synthetic Organic Chemical Manufacturers Assn.**, luncheon meeting, Hotel Roosevelt, N. Y. C. (See above.)

10 **Chicago Perfumery, Soap and Extract Assn., Inc.**, luncheon, Sheraton Towers. (Edward F. Laseh, Tenn. Products and Chemical Corp., 200 S. Michigan Ave., Chicago 4, Ill.)

10 **Society of Cosmetic Chemists** Chicago Chapter meeting, Henrici's Restaurant, Merchandise Mart, Chicago, Ill. (S.C.C., 2 East 63rd St., N. Y. C. 21)

10-13 **Research Equipment Exhibit**, National Institutes of Health, Bethesda, Maryland (James B. Davis, N.I.H., Bethesda 14, Md.)

12 **Pharmaceutical Advertising Committee** meeting, Roosevelt Hotel, N. Y. C. (P.A.C., 489 Fifth Ave., N. Y. C.)

14 **New York Council of State Pharmacists pharmacy assembly**, Statler Hilton Hotel, N. Y. C. (Joel Yellin, Hebrew Home for the Aged, 5901 Palisade Ave., Bronx 71, N. Y.)

14-19 **National Wholesale Druggists' Assn.**, annual convention, Americana Hotel, Bal Harbour, Fla. (N.W.D.A., 60 E. 42nd St., N. Y. C. 17)

16-19 **American Dental Assn.**, annual session, Philadelphia, Pa. (A.D.A., 222 East Superior St., Chicago 11, Ill.)

17-19 **Plastics Show of Canada**, Automotive Building, Exhibition Park, Toronto, Ontario.

18 **American Society of Perfumers**, open meeting, Advertising Club, 35th St. and Park Ave., N. Y. (A.S.P., 630 Fifth Ave., N. Y. C. 20)

18-20 **Packaging Institute, Annual National Packaging Forum**, Biltmore Hotel, N. Y. C. (Chas. A. Feld, P.I., Inc., 342 Madison Ave., N. Y. C. 17)

18-20 **Pharmaceutical Manufactures Assn.**, research and development section, Broadmoor Hotel, Colorado Springs, Colo.

26-27 **Pharmaceutical Manufacturers Assn.**, production and engineering section, Seaview Country Club, Absecon, N. J.

29 **Pharmaceutical Manufacturers Assn.**, financial section (to Nov. 1) Greenbrier Hotel, White Sulphur Springs, W. Va.

30 **Canadian Manufacturers of Chemical Specialties Assn.**, meeting and conference (to Nov. 1), Royal York Hotel, Toronto, Ontario.

31 **The Plastics Institute**, Engineering with Plastics, (to Nov. 1), Institution of Electrical Engineers, London, England.

31 **American Society for Microbiology**, first Interscience Conference on Antimicrobial Agents and Chemotherapy, through Nov. 2. Commodore Hotel, N. Y. C. (A.S.M., 19875 Mack Ave., Detroit 36, Mich.)

NOVEMBER

1-3 **Parenteral Drug Assn.**, annual convention, Statler-Hilton Hotel, N. Y. C. (P.D.A., 1420 Snyder Ave., Philadelphia 45, Penna.)

2-3 **Society of Plastics Engineering** Plastics in Packaging, North Texas Section, Sheraton-Dallas Hotel, Dallas, Texas

7-10 **Packaging Machinery Manufacturers Institute Show**, Cobo Hall, Detroit, Mich. (W. L. Redding, Shea Expositions Corp., One Gateway Center, Pittsburgh 22, Penna.)

13 **Industrial Pharmacy Section A.PH.A.**, eastern regional meeting on pharmaceutical technology. Park Sheraton Hotel, N. Y. C. (A.P.A., I.P.S., 1500 Spring Garden St., Phila. 1, Pa.)

14 **Synthetic Organic Chemical Manufacturers Assn.**, luncheon meeting, Hotel Roosevelt, N. Y. C. (See above.)

14 **Society of Cosmetic Chemists, Chicago Chapter**, Henrici's Restaurant, Merchandise Mart, Chicago, Ill. (See above.)

15 **American Society of Perfumers**, open meeting, Advertising Club, 35th St. & Park Ave., N. Y. C. (See above.)

16-20 **Fifth International Automation Congress and Exposition**, New York Trade Show Bldg., New York City.

21 **Manufacturing Chemists' Assn.**, semiannual meeting, N. Y. C.

21 **Conferences on the Uses of Radioisotopes in Animal Biology and the Medical Sciences**, International Atomic Energy Agency, Food and Agriculture Organization and World Health Organization, Mexico D.F. to Dec. 1. ●

TRADE LITERATURE

Aldehydes. Union Carbide Chemicals Company, 270 Park Avenue, New York City 17—45-pg. booklet describes properties and uses of aldehydes. Constant-boiling mixtures; specification limits; test methods; storage, handling, and shipping; toxicological properties; and selected references are included.

Acids and Anhydrides. Union Carbide Chemicals Company, 270 Park Avenue, New York City 17—48-pg. booklet describes properties and uses of organic acids and anhydrides.

Processing Chemicals. Nopco Chemical Company, 60 Park Place, Newark 1, N. J.—16-pg. catalog (#JWL-100) describes processing chemicals of its subsidiary Jacques Wolf & Company.

Dry Processing. Sturtevant Mill Company, Boston 22, Mass.—8-pg. bulletin discusses the company's full line of laboratory and production equipment.

Silicone Fluids. General Electric, Silicone Products Department, Waterford, New York—20-pg. brochure (S-9) describes GE silicone fluids, which are now being manufactured to the quality standards previously specified for GE Velvasil cosmetic-grade fluids.

Packaging. E. J. Trum, Inc., 80 Richards Street, Brooklyn 31, N. Y.—4-pg., colorful folder illustrates various packaging examples of the company.

Plasdone. Acetylene Chemicals Dept., Antara Chemicals, Division of General Aniline & Film Corporation, 435 Hudson Street, N. Y. C. 14—8-pg. booklet, Plasdone in Oral Pharmaceuticals, describes a variety of pharmaceutical manufacturing uses of Plasdone, a new high-pressure acetylene-derived nontoxic chemical.

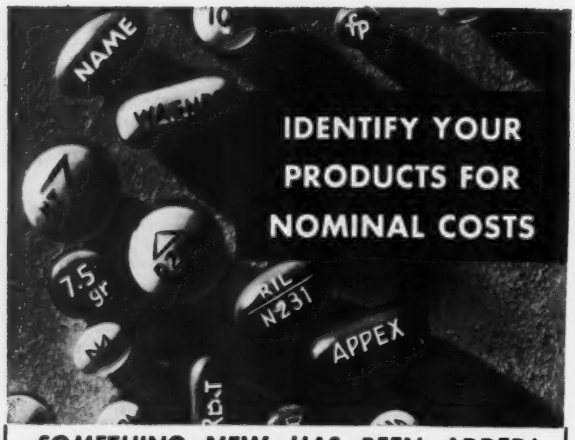
Proportioning Liquid. B-I-F Industries, Box 276, Providence 1, R. I.—2-pg. data sheet and accompanying bulletins featuring model 36-02 Belt Weigher and model EDB Blender contain illustrations, schematic diagrams of a typical installation, dimensions and a description of the operation, uses and advantages of the company's equipment for proportioning applications.

Pedestal Sifter. Sprout, Waldron & Company, Inc., 130 Logan Street, Muncy, Penna.—bulletin (#235) gives technical and dimensional information on a new compact pedestal sifter.

Color Concentrate. F. G. Okie, Inc., Ambler, Penna.—brochure describes Velo, an opaque color concentrate for use in a revised method of tablet-coating, which eliminates the rounding and smoothing steps in tablet-coating, thus reducing time and cost.

Preserving Biologicals. Linde Company, Division of Union Carbide Corporation, 270 Park Avenue, N. Y. C. 17—8-pg. pamphlet describes uses and advantages of preserving biological materials with liquid nitrogen.

Alcohols. Union Carbide Chemicals Company, 270 Park Avenue, N. Y. C. 17—80-pg. booklet contains information on physical properties; constant-boiling mixtures; specification limits; test methods; storage, handling, and shipping; toxicological properties; and selected literature references on 21 industrial alcohols.



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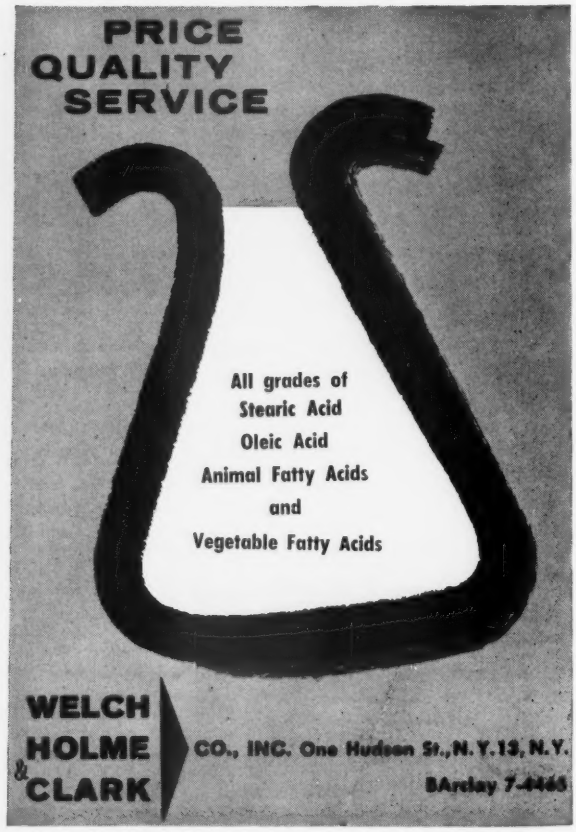

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Liquid Filling Machines. Popper & Sons, Inc., 300 Fourth Avenue, N. Y. C. 10—8-pg. catalog (#361F) describes 11 high-speed liquid filling machines. Included is a range of two, four and eight-head automatic, conveyorized, piston-type liquid fillers capable of handling free-flowing, foamy and viscous drug, soap and cosmetic products.

Coating Stand. Pharmaceutical Equipment Division, F. J. Stokes Corporation, 5500 Tabor Road, Philadelphia 20, Penna.—data sheet (#109) describes the Model 100-VS Coating Stand.

Sterimine. Wallace & Tiernan Inc., 25 Main Street, Belleville 9, N. J.—technical data sheet on sterimine, which is an effective sterlizing agent for water softening equipment and demineralizers.

Pump Conveying Systems. Sprout, Waldron & Co., Inc., 130 Logan Street, Muncy, Pa.—Advance specification sheet (#229) gives details on the Moyno pump conveying systems for conveying fine powdery materials without dusting problems.

Sterilizers. Wilmot Castle Company, 1948 East Henrietta Road, Rochester, New York, a subsidiary of Ritter Company, Inc.—11 1-page bulletins give information on hospital and industrial sterilizers.

Citrus Bioflavonoids. Sunkist Growers, 720 East Sunkist Street, Ontario, Calif.—12-pg. booklet on citrus bioflavonoids in health and disease contains five research reviews covering their chemistry, absorption and metabolism, the maintenance of capillary integrity, and citrus bioflavonoids in the control of spontaneous absorption and in surgery and healing.

Density Grading Centrifugation. Beckman Instruments Inc., Spinco Division, 1117 California Avenue, Palo Alto, Calif.—32-pg. illus. booklet explains the principle, reviews the literature, and discusses the equipment and techniques used in the recent development on the application of centrifugal force.

Automation Systems. General Electric, Schenectady 5, N. Y.—8-pg. brochure discusses the material handling automation systems available from GE, and illustrates the tie between material handling automation and related data processing functions.

Battelle Memorial Institute. Columbus 1, Ohio—brochure explains the Institute's method of operation and tells something of what has been accomplished. The areas of research include chemistry, biosciences, chemical engineering, product engineering, and industrial marketing.

Skin Packaging. Continental Can Company, 100 East 42nd Street, N. Y. C. 17—21-pg. report by the flexible packaging division on an investigation to determine whether it was possible to develop more economical skin packaging materials with particular reference to the elimination of coated and perforated board. Materials, equipment, techniques, and applications are included.

Mechanical Convection Ovens. Blue M. Electric Co., 138th and Chatham Street, Blue Island, Ill. — 12-pg., 3-color bulletin (#1960) illustrates and describes the new line of mechanical convection ovens as well as a detailed explanation of the new Power-O-Matic 60 Control System.

Cartoning Machines. Folding Carton Division, Continental Can Co., 530 Fifth Avenue, N. Y. C. 36—6-pg. color folder describes the "King-Tuk" line of cartoning machines. Specifications for both Closematic and Openmatic machine versions are included.

Vari-Speed Motodrive. Reliance Electric and Engineering Company,, 24701 Euclid Avenue, Cleveland 17, Ohio.—88-pg. catalog includes full rating tables, dimension diagrams, and charts in the complete line of Reeves Vari-Speed Motodrives, ¼ through 40 hp.

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Industry's Books . . .

Flow of Fluids through Porous Materials, *by Royal Eugene Collins, Ph.D., Associate Professor of Physics at the University of Houston, 270 pp., Reinhold Publishing Corp., New York (1961), cloth* **$12.50.**

This volume has been designed as an expository textbook for general use but primarily for the petroleum reservoir engineer or research worker in petroleum production. It offers the student of the subject a step-by-step guide leading from the basic physical characteristics of porous materials and their contained fluids to an understanding of some of the more complex problems of fluid flow through porous media. At every stage the emphasis is on a clear formulation of the problem considered.

Water Treatment (for Industrial and Other Uses), *by Eskel Nordell, Director of Technical Information, The Permutit Co., Second Ed., Illus., 598 pp., Reinhold Publishing Corp., New York (1961), cloth,* **$12.**

This authoritative work now brings water treatment thoroughly up to date with the same reliability of authorship that distinguished the first edition. A practical reference work, it thoroughly discusses the conditioning and treatment of water supplies for industrial and domestic uses. The material in this new edition is greatly enlarged and rewritten, and is so clearly and simply presented that the basic principles discussed and the solutions given to specific problems will be of great value to executives, consultants, engineers, chemists, operating personnel and students.

Advances in Enzymology (and Related Subjects of Biochemistry) *Edited by F. F. Nord, Fordham University, Volume XXIII, 557 pp., Interscience Publishers, Inc. (1961), cloth,* **$15.50.**

Contents: Possible Polypeptide Configurations from the Viewpoint of Internal Rotation Potential, by San-ichiro Mizushima and Takehiko Shimanouchi; Denaturation and Inactivation of Enzyme Proteins, by Kazuo Okunuki; Periodic Enzymic Reactions and Their Possible Applications, by J. A. Christiansen; Pancreatic Lipase, by P. Desnuelle; Collagenases and Elastoses, by Ines Mandl; Cytochromes of Group A and Their Prosthetic Groups, by Rudolf Lemberg; Mechanisms of Synthesis of Adenosine Triphosphate, by Efraim Racker; The Metabolism of 2-Carbon Compounds by Microorganisms, by H. L. Kornberg and S. R. Elsden; Discovery and Chemistry of Mevalonic Acid, by A. F. Wagner and K. Folkers.

Pharmaceutical Advertising: A Survey of Existing Legislation, Offprint from International Digest of Health Legislation, 1961, Vol. 12, No. 1, *53 pages, Geneva,* **3s. 6d, ($.60).**

Throughout the world the number of pharmaceutical specialties is rapidly increasing, and there is a corresponding increase in pharmaceutical advertising. Intensive propaganda is liable to expose the general public to various risks, including the dangers of selfmedication. Legislation laying down strict standards is thus essential in order to safeguard public health and obviate the making of extravagant claims, as well as to ensure that the public is neither caused unnecessary alarm nor induced to delay seeking treatment when necessary. Although a number of countries still have no legislation on pharmaceutical advertising, or are drafting or revising their regulations, some have enacted provisions dealing with this subject, especially since 1940. This comparative study gives an analysis of the existing legislation in some 22 countries.

Silicones, *Edited by S. Fordham, Ph.D., 252 pp., Philosophical Library Inc., New York (1961), Cloth,* **$10.**

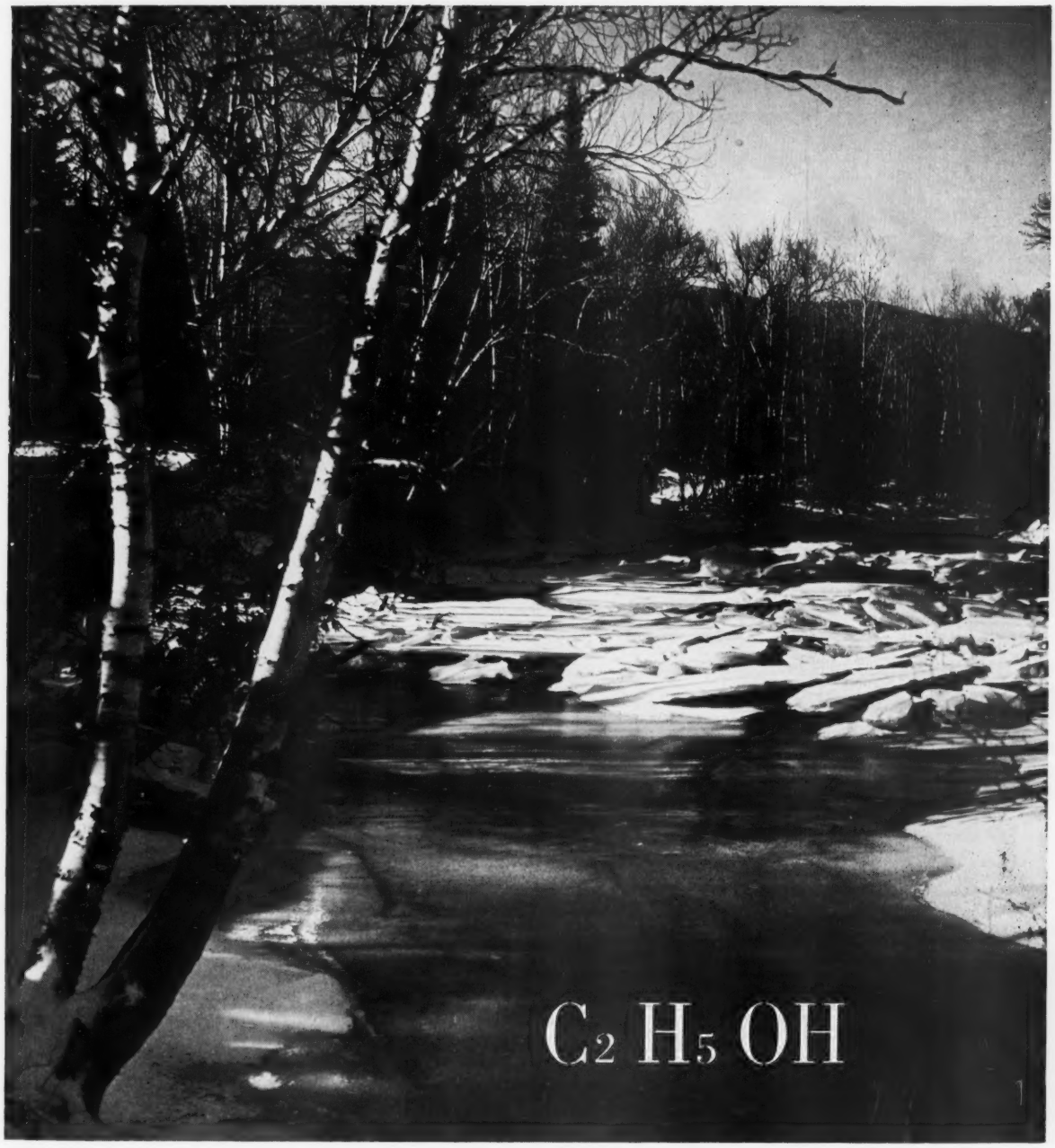
This book offers a comprehensive treatment of a field of science that has expanded rapidly in only a few years. Silicones have been the subject of exhaustive research, their manufacture is undertaken on a large scale, and their applications are extremely varied. The present work fulfills the need for up-to-date information on the subject by providing a condensed, fully documented account of organosilicon chemistry, together with a systematic treatment of manufacturing processes and the applications of silicones. The value of the book is enhanced by the fact that material for each section has been provided by writers specializing in the aspect concerned.

The Practitioner's Handbook, *Edited by William A. R. Thomson, M.D., 711 pp., J. B. Lipincott Co., Phila. first published in 1960, cloth,* **$12.50.**

In January 1946, a series of articles was instituted under the title of Revision Corner, primarily intended to bring doctors, returning to civilian practice after years in the Services, up to date with the ordinary run of ailments with which they would shortly be faced. The original intention was to run this series for one year, or possibly two, but it proved so successful that it has been maintained ever since. In the intervening years, some 300 articles have been published in the series, covering a large number of the practical problems encountered by the general practitioner. The aim of this book is not to purvey the latest news of the newest drugs, but rather to provide the general practitioner with an authoritative, concise and practical review of those methods of diagnosis and treatment which have proved acceptable and reliable in clinical practice.

Chronic Disease and Disability, *by Georgia Travis, 295 pp., University of California Press, Berkeley and Los Angeles (1961), cloth,* **$6.**

This book is intended to help the social worker make critical decisions involving a client's eligibility, budgeting, and guidance The book discusses how illness may affect the client's life and the worker's planning. It covers the major chronic diseases of adults and the concept of psychosomatic medicine as well. In addition to writing about specific diseases and their social implications, the author also tells how the social worker may make more acute observations during interviews, appraise probable effects of illness in relation to the client's practical needs, work with physicians and other medical personnel once disease has been identified, and gain and interpret information about clients under medical treatment.



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WHAT MAKES PEOPLE BUY?

(*Continued from page 370*)

The Pacific Coast is a substantially better market, over-all, for fragrances than is New England. However, a woman in New England, having the requisite income, the most suitable age, and being in the upper social class, will buy more fragrance than her Pacific Coast counterpart. Strange? Perhaps, but these trends, though hard to understand, are definite.

Age, income and social status are important. Marital status and geographic location are less important. City size does not constitute a major influence.

These facts should give the manufacturer and seller an insight into the wants of the consumer. As has already been said, each customer is a challenge, and the challenge may best be answered when the facts are known and put to work.

SWEET SMELL OF SUCCESS

(*Continued from page 307*)

many will demand the form of packaging—aerosol—that is most familiar to them.

This assumption is borne out by the figures. In 1952 and 1953 the average annual increase of total perfume sales was 1.5 per cent. Since 1954, the yearly perfume increases have run between 4 and 6 per cent. From 1958 through 1959, at a time when aero-

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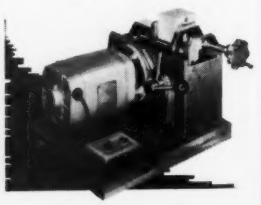

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sols were becoming increasingly popular, total perfume sales increased by 7 per cent. So, we probably are witnessing the start of a new, significant trend in the fragrance field.

The aerosol fragrance history started in 1947 with the introduction of Daggett & Ramsdell's Gay Manhattan, which retailed for $10. There was little activity beyond that point until 1954, when Risdon perfected a glass bottle valve. This, coupled with the development of attractive and safe plastic-coated glass bottles, finally got the aerosol fragrance business underway.

Another important development occurred when Risdon patented the Micro-Mist mechanical break-up actuator, which emitted an extremely fine lace-like spray, ideal for dispensing fine fragrances. The metering valve which emits a measured amount of spray, was another significant step in marketing fine fragrances because it eliminated waste in the use of the fragrance.

Important, too, in the marketing of perfumes was the development of the Mini-Mist, a tiny container no larger than a lipstick case. The Mini-Mist has a decorative outer container and a removable inner case that can be replaced.

All of these developments have made it possible for aerosols to dominate cologne packaging. Whether the groundwork has been laid for some breakthrough in perfume packaging remains to be seen.

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